

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

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The Steel Corporation and the Government

The United States Steel Corporation officials hold that the suit by the Government against it hinges largely upon its purchase of the Tennessee Coal, Iron & Railroad Co., and that the relations of the latter company to the former are different from those of other subsidiary companies. Holding this position the Steel Company has felt it unwise to make large expenditures in expanding the plants of the Tennessee Company.

The United States Attorney-General's office last week expressed through the Manufacturers Record a directly opposite view. The Administration holds that the suit is not based on the ownership of the Tennessee Company, and that it regards the ownership of some other subsidiaries as more vital than the ownership of the Tennessee Company. It therefore takes the ground that the suit is not a valid reason for the Steel Corporation not enlarging its plants in the South.

The United States Steel Corporation insists upon a prompt trial before the Supreme Court, since the Government has taken the case there in order to get a final judicial decision as soon as possible.

The Attorney-General pleads with the Supreme Court to delay the trial, and does succeed, over the protest of the Steel Corporation, in getting a two months' extension, and thus delays the decision as long as possible.

The company is anxious for a decision; the Attorney-General seeks to delay a decision.

It has been intimated that perhaps the Government deems it desirable, from a political viewpoint, to delay the case until after the fall election.

What are the facts?

BALTIMORE, MARCH 30, 1916



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MANUFACTURERS RECORD

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NORMOUS RAILROAD TRAFFIC AND THE DUTY OF SHIPPERS TO CO-OPERATE FOR THE PUBLIC GOOD.

ON March 1, 1915, the railroads of the country had a net surplus of idle freight cars of 1,747. On March 1, 1916, instead of a surplus of 321,000, these roads had a net shortage of 551 cars.

This is the most amazing change, probably, in the history of the railroad interests of this country.

These figures indicate something of the railroad condition and explain why traffic is congested to such an extent that the railroads, in connection with the Interstate Commerce Commission, have organized a committee to undertake by heroic measures find some means to break the blockade of traffic and give freight a chance to move.

Some of this congestion is due to the selfish use of cars for storage purposes by shippers who have been taking the ground that as long as they paid demurrage they had a right to hold on to cars.

Every car that is held beyond the time which under ordinary conditions it could be unloaded presents the facilities of the railroads, and the effect it is to injure other shippers. The holding of cars which could be unloaded and put back to work is more or less a piece of selfishness for personal profit on the part of those who do it, or else it is due to a lack of appreciation of the necessity of the business people of the country co-operating with the railroads unless there is to be a complete breakdown of the whole railroad situation, and thus of the whole business situation.

The time has come when it is incumbent upon every merchant and manufacturer, wherever he may be located, to unload cars as rapidly as possible, or else he will individually sooner or later have to pay the penalty in the general breakdown of the railroads and of the country's business. Selfishness or indifference to the needs of others always reacts on the man guilty of it. It will react with great force upon the interests of the country if the shippers do not do their utmost to unload cars promptly.

Not in the history of the railroads of the country has there been such an abnormal shortage of cars as at present at this season of the year. Unless radical change can be brought about before the beginning of the crop-moving season, we shall have a very serious time in railroad work, and that means in everybody else's work.

The railroads are uniting to the limit of their ability to try to meet this situation and break up the existing congestion. They should have the hearty co-operation of every shipper.

Build an Armor Plant South!

LAST week's statement to Congress on armor plate by President Grace of the Bethlehem Company will do great good.

It would have been of untold value to the company in developing good-will, and of infinite value to the nation in creating a better feeling for the great corporations, if it had been presented at the beginning of the discussion, a month or two ago.

And now, if Bethlehem or some other company will go one step farther and say that, in view of the danger of having all armor plants in one State, it will build another plant in the South, away from the danger zone, provided Congress will agree to give this Southern plant a long-time armor contract, it will win the enthusiastic commendation of the whole country and at the same time help to safeguard its own future by safeguarding the nation in time of war.

If there is any interior point, not dependent upon Lake Superior ores, offering a better location than the South, let this plant be located there.

It is criminal folly for this country any longer to permit its armor plants, its munition plants and 90 per cent. or more of its steel capacity to be concentrated in a limited area, subject to capture and dependent upon ore supplies that could be instantly cut off.

The armor-plate people want to make a bargain with the Government now. Let them recognize the other side and permit the Government simultaneously to make a bargain with them for the development of armor and munition making in the interior on a scale commensurate with the needs and the opportunity.

If no one company is willing to undertake the enterprise, let the armor-plate companies jointly agree to build such a plant in the South and operate it under joint ownership as a subsidiary of all.

But one of the three great concerns now making armor plate could well afford to invest some of its vast earnings in creating in the South an industry of this kind, which would be an insurance in time of war for every dollar now invested in iron and steel.

These concerns are justly asking the Government to prepare against the danger of war; now let them do their part and make preparedness a reality by creating an iron and steel and armor industry not dependent upon one ore supply which could easily be completely cut off.

Until this is done all plans for preparedness are but chimerical dreams, without substantial foundation, and unless these concerns are willing to make such a bargain it is absolutely incumbent upon Congress to take up the development of armor plate and munition making in the South or else be blind to its responsibility to the nation.

The Bethlehem Company is ignoring the most vital fact in the whole armor situation. The question of the cost of armor plate is of trifling importance as compared with the threat made a month ago to advance the price of armor plate if the Government presumed to assert its right to build its own plant. That threat was probably the worst

blunder that any great corporation was ever guilty of making when dealing with the American people through the National Government.

The Bethlehem people saw a new light on that subject when the MANUFACTURERS RECORD denounced it as an outrageous effort to bulldoze the nation; and now the company, in an entirely different spirit, practically withdrawing its threats, seeks to make a bargain with the country on an entirely different basis.

It is a thousand pities that the company was ever guilty of the bad blunder it made, but we believe that its officials scarcely realized the seriousness of their effort to frighten the country by the danger of high prices and the ultimate scrapping of their whole armor plant.

But all of the new offer, not only to advance prices, but to reduce prices on a five-year contract, still falls far short of touching the fundamental question. The Government can afford to count as of comparatively small moment the difference of a few dollars a ton; it can afford to permit the company to withdraw its threat, but it cannot possibly afford to continue any system which leaves the entire armor plate making business in a small area of the East, wholly dependent upon Lake Superior or foreign ores, both of which could be instantaneously cut off at any time by war, leaving us absolutely without any chance to continue making armor plate.

The same is true as to munitions of war and guns and shells.

The country could not afford to accept all three existing armor plants as a gift, if in doing so it made no definite plan for developing armor making far in the interior, whether that interior be in the South or Southwest.

The supreme question is not whether the Government can afford to invest \$11,000,000 in an armor plant, nor whether it can make armor for less than the price now offered, but whether it can risk national life itself by permitting a continuance of existing conditions, in having 90 per cent. of its steel and all of its armor plate, its guns and its shells concentrated in a limited territory, representing only 2 or 3 per cent. of its area, while the other 97 or 98 per cent. of its area is without plants for producing such war materials.

That is the vital question of the hour.

Will the armor-plate people meet the solution suggested and build a plant in the South or Southwest?

If they will not do it, further parleying by Congress would indicate a hopeless inability of Congressmen to appreciate the most momentous problem confronting the nation.

The MANUFACTURERS RECORD hopes that the splendid enterprise of the Bethlehem Company will find a larger field and give a broader treatment of this great national question by accepting our suggestion of building a big armor plant, in the interior, and not dependent upon Lake Superior or foreign ores.

And then, will the other big steel companies follow this good example, or will they take the lead?

The Call of a Young Man to the Nation

"WE ARE WILLING TO OFFER OUR LIVES TO FIGHT THE NATION'S BATTLES,
BUT DON'T SEND US UNTRAINED AND UNEQUIPPED"

C. S. Barrow, Prest. J. E. Crafton, Jr., Vice-Prest.
D. T. Kennedy, Secy.-Treas.

ALBERTA DEVELOPMENT CORPORATION.

Alberta, Va., March 10, 1916.

Editor Manufacturers Record:

I am a constant reader of your valuable paper, and I wish to inform you that I concur wholly with you in your unbiased opinion and views of the timely necessity of "National Preparedness." I have seen through your columns the stand taken by the presidents of large banking institutions and superintendents of large manufacturing industries, and as I am neither, but rather a fair representative of the clan that hails from the country where a majority of the actual fighting force will have to respond, I am herewith trying to voice in an humble way our position.

As the writer is a young man in the prime of his days of useful manhood, I am naturally one of those to whom all ears will turn to hear a response to our first national call for volunteers. Therefore, I make this appeal as one who sees directly, that in the event our country should become involved in war, it will be my duty to answer in clarion tone, "Here am I! send me!" And if you have a memorandum of those who have expressed themselves as standing ready to answer this call, enter my name upon that priceless list!

My forefathers were of very moderate means, but I thank God I have inherited from them patriotism and zeal which they courageously exemplified in all of the former wars of this country, and I prize that more highly than all the riches they might have commanded. Today my greatest ambition is to live, uphold and keep this same spirit, which in the time of need of my country will stimulate and actuate me to keep and perform my most solemn obligation to my country, my God and myself.

I have traveled over one-third of the States in the Union in the past three months. I saw many of the young men in each State, and I took occasion to ask them how they stood on national preparedness and if they were willing and ready to respond in the event our country should become involved in war? All replied, in substance, as follows:

"Our allegiance to our country is the same that exists around the fireside of our parents, and naturally we stand ready to defend our country at any price.

"We do not feel, however, that the proper consideration is being given to the young men who in the time of war will have to do the actual fighting.

"If we are to protect our homes and our parents are in a position to arm us with the proper weapons, and do not do so, then they are placing us in a perilous position to be annihilated by the enemy and placing themselves in a serious situation. So it is up to Congress, as it would be up to our parents, to see that our young men are properly armed in order for us to protect our country."

There are two great phases to our country's present situation; namely, the duty of Congress to make thorough preparation for war and the duty of our young men to be ready and willing to respond to the first call.

Our country has grown rich in dollars since the present European war commenced, and no less rich in spirit of patriotism, which has been inculcated in every young man of our country. It has been the means of bringing us face to face with a duty all of us owe to our country that could have never been brought by any other means. We realize the sense of our duty so keenly today that nine men out of every ten stand ready to answer, where there was only one out of ten twelve months ago.

Our young men are just beginning to appreciate the services our old soldiers rendered to our country during the Civil War, and we see more clearly why these men are inspired with immortal patriotism in their old age. If these old soldiers were willing to give their services and lives to our country, which at that time was very limited in comforts, in opportunities and privileges, then what should our duty be today? when we have at our command all comforts, conveniences, luxuries and a country rich in natural resources and boundless in opportunities?

Mr. Editor, do not hold up voicing to the world that we are a peaceful and liberty-loving people and are standing

squarely behind our President. Some may be pro-Allies or pro-German, but all of us are pro-Americans.

"For we are the same that our fathers have been;
We see the same sights that our fathers have seen;
We drink the same stream, and we feel the same sun,
And run the same course that our fathers have run."

I am glad that we have such men as you are to inform us of our national preparedness and to give us actual facts and logical advice, which is so stimulating in this our crisis, and at the same time inculcating in us the proper patriotism for our country.

J. E. CRAFTON, JR.

We have read and reread that letter, for it brings home with intensest earnestness the one thought that has been driving the MANUFACTURERS RECORD to keep on preaching for preparedness. We have known, as every intelligent man could have known, that the Mexican situation alone was one that our entire army was not able to cope with, and that our lack of an adequate army adequately equipped was the reason for this danger. The Mexican murderers who invaded our country and murdered soldiers and citizens did it because they knew we were not prepared. They knew the pitifully small numbers of soldiers that had to guard our long border line; they knew that if they could bring about war between Mexico and the United States our unpreparedness would be our temporary undoing, and they hoped that before we could make adequate provision they might have the substantial physical backing of some other country, as they have doubtless had its financial backing.

We are sending our little army of magnificent fellows—men of high character, of splendid training and dauntless patriotism—straight into the jaws of death. The men in the ranks as well as the officers who lead them know that it is not theirs to reason why; it is only theirs to do and die. But they ask themselves, "Why should we have to die when our country could have saved us from the needless sacrifice?"

Every death of the men who have gone into Mexico, every death of those cold-bloodedly murdered in Columbus, every death from disease or the bullet of those who follow where these men are leading is murder on the part of this nation because of our unpreparedness.

Every man who has fought preparedness, every man who has sat on the fence and taken no aggressive part for preparedness shares in the responsibility for every murder our nation commits in the death of our own men sent into Mexico in inadequate force, inadequately equipped.

There would have been no murder at Columbus, there would have been no need to invade Mexico with all its limitless possibilities of evil if we had had an adequate army properly equipped.

In the name of the regular troops, in the name of and for the sake of the splendid young manhood, like our Virginia correspondent, who will offer their lives upon the altar of their country and fight its battles, the MANUFACTURERS RECORD pleads for a just recognition by Congress and the people of the need of saving their lives by the creation of an army and a navy whose power will save us from attacks by international murderers and burglars.

The nation that sends into battle its untrained and inadequately equipped soldiers is guilty of cold-blooded murder, and every man who falls to appre-

ciate this and so to act as to avoid it is himself guilty of sharing in this murder charge. Bear in mind that this is not a new or an original suggestion. It was made in substance by a Revolutionary hero, Light Horse Harry Lee, and its force and truth have grown as the years have rolled on.

Will Congress heed the warning? Will the nation heed it and compel Congress to act?

The MANUFACTURERS RECORD has sought to awaken our country to the need of preparedness, not that we might make war, but that we might be saved from war brought on by aggression due to our helpless condition.

The people of Texas and New Mexico and Arizona now know what our lack of preparedness has cost, and they can surmise, because they are in touch with the situation, what it is destined to cost in blood and money. Certainly the cost in money will be infinitely greater than would have been the cost of the maintenance of a fair-sized army; but the money cost is as nothing compared with the lives that will be sacrificed because of our shortsightedness and our apathy.

Reader, are you guilty? Up to July, 1914, the MANUFACTURERS RECORD was guilty because it believed in peace and hated war. Since then we have seen the new situation in the world and have tried to show it to our country.

INDUSTRIAL PROGRESS OF SOUTHERN CITIES.

PRELIMINARY reports concerning manufacturing enterprises which are being issued from time to time by the Census Bureau give a summary for the following Southern cities:

Houston, Tex.: In 1914 the amount of capital invested in manufactures was \$25,443,000, a gain of \$8,849,000, or 53.3 per cent., over \$16,594,000 in 1909. The value of its manufactured products was \$25,855,000 in 1914 and \$23,016,000 in 1909, the increase being \$2,839,000, or 12.3 per cent.

Hot Springs, Ark.: The capital reported invested in 1914 was \$580,000 and \$770,000 in 1909, a decrease of \$190,000, or 24.7 per cent., and the value of its products was \$627,000 in 1914, a decrease of \$218,000, or 25.8 per cent., over \$845,000 in 1909.

El Paso, Tex.: The capital invested, as reported in 1914, was \$8,000,000, a gain of \$4,414,000, or 103.8 per cent., over \$4,252,000 in 1909. The value of El Paso's manufactured products was \$6,135,000 in 1914 and \$3,638,000 in 1909, the increase being \$2,497,000, or 68.6 per cent.

Bristol, Va.-Tenn.: As reported in 1914, the capital invested in the twin cities was \$2,941,000, a decrease of \$122,000, or 4 per cent., over \$3,063,000 in 1909, but the value of its products in 1914 was \$3,398,000, an increase of \$549,000, or 19.3 per cent., over \$2,849,000 in 1909.

Waco, Tex.: The capital invested in manufacturing at Waco in 1914 was \$3,964,000, a gain of \$403,000, or 11.3 per cent., over \$3,561,000 in 1909. For the same period the value of its products was, respectively, \$5,612,000 and \$4,769,000, the increase being \$843,000, or 17.7 per cent.

Sherman, Tex.: The capital invested in 1914 was \$2,968,000, a gain of \$1,330,000, or 81.2 per cent., over \$1,638,000 in 1909, while the value of the products was \$7,028,000 in 1914 and \$4,676,000 in 1909, the increase being \$2,352,000, or 50.3 per cent.

Palestine, Tex.: The amount of capital reported invested in manufacturing in 1914 was \$906,000 and \$1,524,000 in 1909, a decrease of \$618,000, or 40.6 per cent., and the value of its products, which amounted to \$1,222,000 in 1914 and \$1,313,000 in 1909, showed a decrease of \$91,000, or 6.9 per cent.

San Angelo, Tex.: In 1914 the amount of capital invested was \$380,000, a gain of \$74,000, or 21.3 per cent., over \$306,000 in 1909. The value of its products was \$499,000 in 1914 and \$318,000 in 1909, an increase of \$181,000, or 56.9 per cent.

NEUTRALITY DEMANDS THAT WE PERMIT FREE SHIPMENTS OF FOODSTUFFS AND MUNITIONS TO ALL EUROPEANS WHO CAN BUY THEM.

SENATOR GRONNA of North Dakota recently presented to the Senate a resolution adopted by the Minnesota Conference of the Augustana Synod, favoring the placing of an embargo on munitions of war. A number of such petitions lately have been received and have been read into the Congressional Record.

The Minnesota Conference of the Augustana Synod, a Lutheran organization, may have acted in good faith, but this cannot be said of all such petitioners. Most of the petitions have come from German-Americans, and are part of the German propaganda, which has by its persistent work deceived some people and made them believe a lie. The efforts to mislead the public and to secure an embargo on munition shipments are a part of a definite program to help Germany win this war. It would be just as proper to put an embargo on grain shipments as on shells and guns. The foodstuffs that are being shipped to the Allies are equally as essential to the maintenance of their armies as are the munitions sent to them. But are the German farmers of the West refusing to sell their wheat and corn and hogs because they are being bought for the armies of the Allies?

The principal arguments made by those who advocate an embargo on arms is that such an embargo would be in line with the spirit of strict neutrality. But it is simply because, as a matter of fact, that such an embargo would be an absolute violation of neutrality that the American Government has taken a firm stand against the proposals for an embargo. There would be fewer petitions for an embargo from honest Americans if the basis for the firm stand of the American Government were generally understood.

Neither the German nor the Austrian Governments have at any time contended that the action of the United States in permitting exports of munitions to the Allies is contrary to international law. The position of the American Government was clearly set forth in the note of Secretary Lansing forwarded from Washington to Austria on August 12, 1915. The position of the United States can be summed up in the following four paragraphs of the American note:

The Government of the United States has given careful consideration to the statement of the Imperial and Royal Government in regard to the exportation of arms and ammunition from the United States to the countries at war with Austria-Hungary and Germany. The Government of the United States notes with satisfaction the recognition by the Imperial and Royal Government of the undoubted fact that its attitude with regard to the exportation of arms and ammunition from the United States is prompted by its intention to "maintain the strictest neutrality and to conform to the letter of the provisions of international treaties," but is surprised to find the Imperial and Royal Government implying that the observance of the strict principles of the law under the conditions which have developed in the present war is insufficient, and asserting that this Government should go beyond the long-recognized rules governing such traffic by neutrals and adopt measures to "maintain an attitude of strict parity with respect to both belligerent parties."

To this assertion of an obligation to change or modify the rules of international usage on account of special conditions the Government of the United States cannot accede. The recognition of an obligation of this sort, unknown to the international practice of the past, would impose upon every neutral nation a duty to sit in judgment on the progress of a war and to restrict its commercial intercourse with a belligerent whose naval successes had prevented the neutral from trade with the enemy. The contention of the Imperial and Royal Government appears to be that the advantages gained to a belligerent by its superiority on the sea should be equalized by the neutral powers by the establishment of a system of non-intercourse with the victor. The Imperial and Royal Government confines its comments to arms and ammunition, but if the principle for which it contends is sound, it should apply with equal force to all articles of contraband. A belligerent controlling the high seas might possess an ample supply of arms and ammunition, but be in want of food and clothing. On the novel principle that equalization is a neutral duty, neutral nations would be obligated to place an embargo on such articles because one of the belligerents could not obtain them through commercial intercourse.

But if this principle, so strongly urged by the Imperial

and Royal Government, should be admitted to obtain by reason of the superiority of a belligerent at sea, ought it not to operate equally as to a belligerent on land? Applying this theory of equalization, a belligerent who lacks the necessary munitions to contend successfully on land ought to be permitted to purchase them from neutrals, while a belligerent with an abundance of war stores or with the power to produce them should be debarred from such traffic.

Manifestly the idea of strict neutrality now advanced by the Imperial and Royal Government would involve a neutral nation in a mass of perplexities which would obscure the whole field of international obligation, produce economic confusion and deprive all commerce and industry of legitimate fields of enterprise, already heavily burdened by the unavoidable restrictions of war.

It is worth while printing this again in order to bring this clear statement to the attention of all honest people. There are some who would not change their pro-German tactics of seeking to deceive the public even though an angel from Heaven spoke to them. Our people have a right legally and morally to sell grain or cotton or cattle or munitions to European countries; it is their responsibility to secure the delivery of such goods. With the delivery we have nothing to do. If Germany can buy cotton or grain or munitions in this country and have them delivered at her ports, it is our right to sell them to her just as we do to the Allies. It is not our place to give Germany a navy superior to Great Britain's in order to enable her to control the seas and deliver the stuff which she has a right to buy here.

The rankest kind of unneutrality would be for this country to aid Germany to overcome England's control of the seas or to forbid England using the power which her navy gives her to land goods bought from us at her ports.

The American people are not all fools, nor can they all be bamboozled by the false pleas set up by pro-Germans against the shipment of munitions of war.

IS THE UNITED STATES ALONE TO BE UNPREPARED COMMERCIALY?

THE imports that came into this country following the enactment of the Underwood tariff bill in October, 1913, were the greatest in volume and value in the history of the United States.

How much free trade there was in that law is shown by the fact that 74 per cent. of all imports are entering free of duty. Every million dollars' worth of goods that are brought into this country from abroad replace an equal amount of American products if this country can produce the particular kind of goods imported.

It has been argued by leaders of the party in power that the European war furnished the equivalent of a protective tariff by halting importations. For a time, that was true. It is no longer true. The deluge of foreign importations is again under way.

The European war began the latter part of July, 1914. Thus, half of the year 1914 was marked by record-breaking importations, while the latter half was characterized by an impairment of imports. Nevertheless, the volume of imports the first half of the year was large enough to neutralize and overcome the low figures for the latter part of the year, so that the total imports for the whole year 1914 amounted to \$1,789,300,000.

Without the benefit of half a year of record-breaking importations, or half a year in which trade was unfettered by the restraints of war, it might be thought that the year 1915, throughout which the interferences with commerce continued, would show a low average of importations.

But despite the fact that the European war, with its restraints upon commerce, ran throughout the year, the total imports for 1915, amounted to \$1,778,600,000, or only about \$10,000,000 below the imports for the preceding year.

No less than \$25,900,000 worth of raw cotton was imported into this country in 1915, against \$2,100,000 in 1914.

Considering the great showing made by the South in products other than cotton, it is interesting to note that in recent months, especially the imports

of meat and dairy products, have been increasing. In the single month of December, 1914, for instance, the imports of dairy and meat products were valued at \$1,900,000, but in December, 1915, they were \$4,000,000. Unmanufactured tobacco, in the single month of December, 1914, was imported to the extent of \$1,800,000, while in the corresponding month of 1915, the importation rose to \$1,900,000.

The vast importations of sugar in 1914, amounting to \$127,000,000, were exceeded in 1915, when, despite the continuance of the war, the sugar importations were \$179,000,000.

The admission of 74 per cent. of all imports free of duty is hitting the South all along the line. It is hitting the South's lumber, iron ore, pig iron, rice and all agricultural products, not so much by present importations as by the fear of the deluge that will come after the war closes, unless our tariff rates be raised to save us from such inundation. Shortly after the war began, Canada raised her tariffs, and the result is that she has been able to finance herself without recourse to "war taxes."

All the European belligerents are preparing for industrial mobilization following the close of the war. The end may be years away, but although distracted by actual war, they are preparing for the commercial struggle that is to come.

Is the United States alone, of all the great nations of the world, to be unprepared?

ARE YOU WILLING TO UNITE FOR THE GOOD OF ALL?

THE citrus fruit growers of Florida want a protective tariff against foreign fruit.

The sugar growers of Louisiana and Texas want protection against foreign sugar.

The rice growers of the same States justly demand protection against foreign rice.

The egg raisers of the country want protection against the threatened flood of eggs from China, laid by hens that are permitted to be the scavengers of human fecal matter.

The cotton growers want protection against Egyptian cotton.

The iron ore and the coal miners, the iron makers and the steel men, the lumber producers and the textile manufactures and corundum and the mica miners and many others throughout the South want to have their interests safeguarded by protection.

And all of them should have a fair degree of protection through a tariff that would safeguard them from ruinous competition by foreign rivals. In this way we would build up our own country, safeguard every interest, benefit the whole nation in time of peace and protect it from present conditions in time of war. Suppose all these interests should conclude to unite for the welfare of all?

MAKING INFORMATION AVAILABLE.

AN idea for mobilizing the information of our libraries and other centers of knowledge for the greater availability of the general public is advocated by George Winthrop Lee, librarian of Stone & Webster, Boston, in a recent article quoted in the Bulletin of the American Library Association. Mr. Lee's plan, which seems promising of some very admirable results, is to have libraries throughout the country register with some central bureau, stating the topic or topics they are severally particularly equipped to furnish the best information on in the way of authentic publications, and co-operate through this central bureau by means of card indexes and interchanging agreements. The principal drawback to the scheme would seem to be the large amount of clerical work, correspondence and mailing necessitated by its execution, but if these should not prove so burdensome as to render it impracticable, the plan might be of considerable benefit in giving to all of the participating institutions the use of the facilities on any subject of the library specializing on that subject.

THE SOUTH BEGINNING TO DEMAND FAIRER TREATMENT FROM THE POLITICIANS.

FROM a leading business man of Birmingham the MANUFACTURERS RECORD has a letter called forth by our recent editorial suggesting that the Administration should ask from the Supreme Court a prompt consideration of the suit against the United States Steel Corporation in the interest of getting the matter settled for the benefit of the South as well as for the nation. In the letter our correspondent says:

It does seem a very hard fate that while we have the Democratic party in power that it will not raise a finger to help the South. It stands by and sees all of the tremendous appropriations for new plants go to other sections of the country while we get nothing but the pleasure of voting the Democratic ticket. I have almost come to the conclusion that the old expression of the "solid South" is absolutely correct. The South seems to be dense to the point of absolute stupidity when it comes to demanding that it be helped in a legitimate and reasonable way by its friends in the Administration. The Democratic party seems to pay no attention to the South, because it knows the South will vote the Democratic ticket. The Republican party gives no hearing to the South for exactly the same reason. . . .

I hope you will follow this up until we get enough pressure brought to bear at Washington to get a square deal.

This letter, like the one we printed last week—and they both came from Democrats who have for years been leading in the real development of the South—is indicative of the feeling that is growing in this section against the way in which the South is being sacrificed by its own party.

The interview published this week with Secretary Lane illustrates and emphasizes this situation. Secretary Lane, in his interview, takes strong ground in favor of increasing the importations of iron ore from other countries, and in favor of free trade on iron ore, although these importations are wholly in the interest of iron and steel concerns of the East, and are directly antagonistic of the iron and steel-making interests of the South. Free iron ore is a heavy handicap against the South and a strong lever to lift the iron interests of the East into still greater power and wealth. Notwithstanding this fact, Secretary Lane, with a shortsightedness which the MANUFACTURERS RECORD greatly regrets to see in him, in his interview practically gives no encouragement whatever to the South, nor does he say one word in behalf of the prime importance, from the national standpoint, of the development of the iron and steel interests of the South. On the contrary, the whole force of his statements looks to the larger development of Eastern plants using foreign iron ores and to the development of the enterprises dependent upon Lake Superior ores.

It is a lamentable fact that the South is being made to suffer by those of the party which it has kept in power. It is being sacrificed in the house of its friends as probably no other section ever has been sacrificed by a party put into power by that section.

The Birmingham letter which we have quoted very properly enters a vigorous protest against such a policy on the part of the Democratic party, and it at the same time calls attention to the fact that because the South has been solid politically, it has to a large extent been likewise ignored by the Republican party.

This section is thus ground between the upper and the nether millstone of politics because of its political solidarity. The Republican party, except under McKinley, never has given the South a fair deal, and therefore no other Republican President has ever so closely touched the heart of the South as did McKinley. The Democratic party no sooner gets into power than it hits the South harder blows even than the Republicans.

In protest against the South being sacrificed on the altar of politics, another Southern business leader writes:

The situation is more disgusting and discouraging to me than I have words to express.

It would seem that the Democrats look upon the South on the theory that "What is the use to run after a street car when you have already caught it?" While the Republicans take the position, "What is the use of giving the

South anything, because they always go solid for the Democrats."

Between the two we seem to be the goats, and it would also seem that our Representatives and our newspapers and our civic organizations are perfectly contented to sit by without raising a hand, and with perfect complacency accept with grace and without a murmur all the punishment and indifference that our beneficiaries seem willing and anxious to heap upon us. The editors of our local papers actually admit that they overlooked reference in their own papers to the apparently inexcusable action on the part of the Assistant Attorney-General in deliberately delaying a case which should, in the interest of the entire country, be advanced on the calendar.

Both Taft and Roosevelt lost splendid opportunities for aiding the South and strengthening them selves, and now, as one of our correspondents said last week, the South cannot even get a member of the Supreme Court to succeed the member who died, though there are many Southern men amply fitted for this exalted position.

"UNEXPECTED AND EXTRAORDINARY FEATURE."

["Holland's" syndicate letter to leading daily papers.]

STATISTICS recently prepared by Richard H. Edmonds, editor of the MANUFACTURERS RECORD of Baltimore, demonstrate the manner in which the States of the South are now rapidly approaching in agricultural products other parts of the country. The unexpected and extraordinary feature discovered in these figures is that of the total gain \$317,000,000 was in the South. That is about 60 per cent. of the whole.

One of the peculiar and as yet unexplained items in Mr. Edmonds' statistical report is the figures which make comparison between California's farm crop in money value and those of Georgia. The Southern State was \$21,000,000 ahead of California. California's total crop in 1915 was of the money value of \$212,000,000. Georgia's was \$233,000,000. Many who have studied statistics that have come from the West and Northwest are still inclined to think that those which tell the money value of the crops in four States of the Northwest—Minnesota, North and South Dakota and Montana—after all entitle these States to first rank. For the money value of the crops in these four States in 1915 was about \$650,000,000.

Notwithstanding his usual acumen, "Holland," whose letters have for twenty-five years or more been a striking feature of many of the leading papers of the country, missed a good point. No explanation of Georgia's lead over California in agricultural products was needed, for it is a fact, and the U. S. Department of Agriculture so shows in its reports that the total value of California's farm products in 1915 was \$212,283,000, and that the value of Georgia's was \$233,506,000.

"Holland" also says: "Many who have studied statistics that have come from the West and Northwest are still inclined to think that those which tell the money value of the crops in four States of the Northwest—Minnesota, North and South Dakota and Montana—after all entitle these States to first rank. For the money value of the crops in these four States in 1915 was about \$650,000,000."

The value of the crops in the four States named was higher than "Holland's" estimate, having been \$706,000,000. But that is far below the total of four Southern States. The crop values in Texas, North Carolina, South Carolina and Georgia for 1915 amounted to \$746,800,000, or \$30,000,000 in excess of the four Western States named by "Holland." But if the immense size of Texas is considered as giving too big an advantage in this comparison, take four States in the order of their location—North Carolina, South Carolina, Georgia and Alabama. Here are the comparisons:

VALUE OF FARM CROPS IN 1915.

Four Western States.	Four Southern States.
Minnesota.....\$241,897,000	North Carolina.....\$202,000,000
North Dakota.....239,892,000	South Carolina.....150,940,000
South Dakota.....167,338,000	Georgia.....233,506,000
Montana.....76,043,000	Alabama.....160,371,000
Total.....\$706,230,000	Total.....\$746,817,000

These four central Southern States beat by \$30,000,000 the four Western States selected by "Holland" as typical of the agricultural wealth of the West.

If the South will continue to increase its food production so as to keep at home the millions it sends away for meat and grain, it will soon accumulate wealth through its agriculture far more rapidly than these Western States have done.

INCONCEIVABLE IRREVERENCE USED BY A SO-CALLED "ANTI-PREPAREDNESS COMMITTEE."

IF there is one form of blasphemy that shocks every reverent mind more than anything else, it is when men dare to take the sacred words of the Son of God and make a parody of them and turn them from the highest scriptural meaning into an effort to be jocular. It is inconceivable that intelligent men should dare to trifle with the words of the Almighty and to attempt to make a joke of the most sacred things, according to human understanding, which the Saviour of mankind ever uttered.

Nevertheless, this attempt to parody and turn into a joke the words of Christ is found in a statement which, according to a Washington dispatch to the Chattanooga Times, has been issued by the Anti-preparedness Committee. According to that dispatch, the committee gave out "a new version of the beatitudes, according to the 'preparedness' school of metropolitan preachers." The text is said to be by the Rev. John Haynes Holmes of the Church of the Messiah, New York City, and reads as follows:

Blessed are the proud in spirit, for theirs is the kingdom of earth.

Blessed are they that mourn, for they shall be persecuted.

Blessed are the mighty, for they shall inherit the earth. Blessed are they that hunger and thirst after preparedness, for they shall be drilled.

Blessed are the merciless, for they shall obtain victory. Blessed are the sure in heart, for they shall steal God.

Blessed are the war-makers, for they shall be called the champions of God.

Blessed are they that are conscripted for preparedness sake, for theirs is the kingdom of earth.

Blessed are ye when men approach you and tax you and conscribe you; for my sake rejoice and be exceedingly glad, for great is our reward in battle; for we conscripted they the soldiers that were before you.

Ye are the best of the earth, but if the best have lost their security, wherefore shall they not be bested. They are henceforth good for nothing but to be cast down and trodden under foot of men.

Think not that I come to destroy; I come not to destroy, but to fortify. For verily I say unto you, that heaven and earth may pass away unless all be prepared. Except your preparedness exceed the preparedness of the Huns and Japanese, ye shall in no wise enter into the kingdom of earth.

Ye have heard that it was said to them of old time, thou shalt not kill, and whosoever shall kill shall be in danger of the judgment. But I say unto you, whosoever is not prepared against his brother shall be in danger of the judgment. . . . Deal with thine adversary quickly, lest haply the adversary refer thee to the judge, and the judge deliver thee to the court and thou be cast into arbitration. Verily, I say unto you, thou shalt by no means come out thence till justice be done.

Ye have heard that it was said, resist not evil. But I say unto you, that this is ridiculous. Whosoever shall smite thee upon the right cheek, smite him upon the other also. And whosoever shall seek to take away thy coat, seize his cloak also. An eye for an eye and a tooth for a tooth! . . . Whatsoever ye fear that men do unto you, prepare ye also to do unto them. May this be the law—and the profits!

The MANUFACTURERS RECORD has hesitated to publish such an impious, sacrilegious travesty upon the words of Christ. That marvelous Sermon on the Mount, which, through the centuries has been regarded with the profoundest reverence by every soul capable of reverence, is here turned into the veriest joke by this impious effort of a Washington committee, and formulated, too, by a minister! We had hoped that the latter statement might be false, but Dr. Holmes himself acknowledges its truth. May we not yet trust that the members of the committee will be so everwhelmingly ashamed of this piece of work that they will make a public apology to the nation and seek the forgiveness of Almighty God?

We say this not because the statement is issued by a committee working against "Preparedness," but because it is incumbent upon thinking people, whatever may be their business or their profession, in every way they possibly can, to protest against such an irreverent use of the Scriptures.

If, however, this "Anti-Preparedness Committee" had desired to prove that it was wholly unfitness from every point of view to represent intelligent and self-respecting people, it certainly could not have done so in any more forceful way than in issuing this so-called "New Version of the Beatitudes."

The Industrial Future of the South and the Tariff

HOW EUROPE AND CANADA ARE HANDLING TARIFF QUESTION.

[Special Correspondence Manufacturers Record.]

Washington, D. C., March 27.

The call for a change in the economic policy of the South has met with response from many of the Southern members of Congress. At the hearings before the Ways and Means Committee when the Underwood tariff law was being framed nearly all the business men and manufacturers who appeared from the Southern States asked for tariff protection for the industries of the South.

All of Europe is now planning for protective tariffs.

Canada, soon after the beginning of the war, increased her tariffs, with the result that her income from customs has greatly increased, despite trade interferences, and she has been able to finance herself through a critical juncture.

The American Government recently was apprised of the fact that Chancellor of the Exchequer McKenna is preparing a budget which plans for tariff increases. It is expected that Great Britain will openly abandon her free-trade policy following the close of the European war.

Germany would be making a new tariff now were it not for the war. Her commercial treaties with other nations expire in 1917, and it is her custom to provide new tariffs which become part of the new commercial treaties. All the European nations will increase their tariffs following the close of the war.

Moreover, all the nations now belligerent are preparing for industrial mobilization. The German Government has established an Industrial Staff to plan for trade aggressions following the end of the war. The Allies are planning for an agreement among themselves for trade expansion in the markets of the world. The one nation whose purchasing power will not be reduced and whose market will still be the richest in the world will be the United States, which, by reason of its possession of the greatest store of gold ever held by one nation, will become the natural target of commercial attack from Europe.

Leading economists of the United States admit that there is considerable peril to the continued peace of the nation in the possession of a gold supply exceeding \$2,000,000,000, a sum greater than ever held previously by any two nations.

Anticipating that the present European belligerents will make a desperate effort to recover their former supply of gold, and that the very possession of such a large quantity will be an invitation to industrial and probably military aggression, the Federal Reserve Board is considering the practicability of establishing agencies of the Federal Reserve banks in Europe.

Governor Strong, of the Federal Reserve Bank of New York, is in England now for the purpose of inquiring into the practicability of establishing branch Federal Reserve banks there, with a view to purchasing a line of foreign exchange bills at the end of the war, thus relieving the demand upon the American gold supply.

It is not expected that the United States will be able to keep its present store of gold. The object of establishing branch banks in Europe would be to prevent any sudden demand that might be caused by trade tendencies at the end of the war.

Even if the Democratic Administration as a whole is not looking ahead and is delaying industrial preparedness, the Federal Reserve Board is aware that all the belligerent governments will be highly organized and highly concentrated at the end of the war. They will mobilize for the foreign trade, and especially for the capture of the American market in the same systematic way in which they have mobilized for war.

While the Government of the United States is making no preparations for tariff protection, except to the extent of planning for an anti-dumping law, which would merely provide penalties for selling foreign goods at lower prices here than the prices for which they are sold in the country of origin, the Federal Trade Commission has just concluded an important investigation into the cartels and combinations of Europe.

With reference to the anti-dumping law, the measure

may be said merely to treat the danger superficially. The danger is not so much that foreigners will sell at prices lower in the United States than in their own country, but that they will be able to preserve uniform prices at home and abroad and still undersell Americans because of their lower wages and lower costs of production.

A real program of industrial mobilization would benefit the South and Southwest probably more than any other section, because some of the greatest undeveloped resources are in those sections of the country. If the information which has been gathered by the Federal Trade Commission, under the direction of Chairman Joseph E. Davies, is applied scientifically, it will mean that the Government itself will not only furnish tariff protection to the South, but will put its strength behind the development of the great iron and coal deposits of the South.

What the South must contend with after the close of the European war is to be shown in the report that will be made by the Federal Trade Commission. The trade combinations of Europe have been broken up by the war, but there will be new international combinations as a result of it.

The growing iron and steel industry of the South should have strong support from the United States Government itself. Some years ago Charles M. Pepper, one of the ablest special agents of the Department of Commerce at that time, made a special investigation into the iron and steel combinations of Germany, and it is expected that every assertion which he made then has been vindicated by the more recent investigation of the Federal Trade Commission, the results of which soon will be announced. It is expected that the laws of the United States will be amended to provide for pooling agreements for the foreign trade.

Mr. Pepper, who worked in conjunction with A. M. Thackera, American consul-general at Berlin, pointed out that in Germany the influence of the combinations, which are variously described as trusts, syndicates or cartels, is exhibited very clearly in the different branches of the iron and steel trade. From the first stage, which is the coal in the ground, to the last stage, which is the making of the most highly-finished articles, between 75 and 80 syndicates are concerned in the manufacture and sale of iron and steel products. This industry, therefore, furnishes an excellent means of judging how the principle of combination is worked out in the industrial and commercial system of Germany. It is not yet universally accepted as an established case of evolution, but doubts are entertained by some economists whether the system has not been carried to the point where a retrogression in the interest of free competition is desirable. But the existing syndicates or cartels in their purposes, and methods and their relation to production and distribution as well as to prices, may be examined critically and impartially.

All the syndicates are governed by statutes of their own making, which, if they have not the force of statute law, at least have the same effect on the organizations for which they are devised. The details of these regulations are rarely made public, but their general nature becomes known through their operation. A common model apparently has served for the majority of them, the adaptation being made to the special circumstances of the particular industries which may be formed into a syndicate.

The A B C of the syndicate system as applied to the iron and steel industry is concentrated in the following group: The coal syndicate, the coke syndicate, by-products syndicate, raw iron syndicate and steel work syndicate.

Coal, which is as much raw material to the iron and steel industry as is the iron ore, is effectually controlled by the Westphalian Coal Syndicate. The coal industry enjoys no protective tariff duties, as do most of the finishing industries. There is, moreover, the competitive supply of the coal fields of the United Kingdom, with easy water transportation to the Ger-

man ports, and to many of the inland points to the river and canal systems. Nevertheless, the Westphalian Coal Syndicate enjoys a substantial monopoly of supplying coal to the iron trade.

The germ of this syndicate was disclosed in 1878, when a number of the leading mines formed a combination to raise prices to a remunerative level by preventing overproduction. This agreement related to the prices of gas coal, and it was supplemented three years later by one for the control of open-burning coal. For several years thereafter various combinations were made for restricting the output, but they were usually local in their sphere and their efforts to regulate the selling prices were not wholly successful.

The working machinery of the German syndicate is through a stock company with a small capital, whose shares belonged to the owners of the coal mines in the combination. Shares cannot be transferred except by the consent of the association. The stated objects are the purchase and sale of coal, coke and briquettes. Constituent mines bind themselves to sell all their output to the syndicate except that which is needed for their own purposes and for local consumption. This has become a very important reservation since the purchase of collieries by the blast furnaces and rolling mills. The syndicate has the right to sell the product of other mines than those whose coal has been sold through the syndicate, in accordance with an elaborate system which governs their participation and their allotments. The internal managements regulate the relation of the mines to the central organization, and various penalties are provided for infringing the regulations. The chief interest is not, however, in the regulation of the members among themselves, but in the relation of the syndicate to the consumers—that is, to the general public. The market is divided into groups, and there are several divisions for the different classes of coal. Selling bureaus are established at various centers, where coal is delivered to dealers who control the retail trade. The minimum sale to any customer is 6000 tons.

In its original relation to consumers no fundamental right of free purchase in open markets was recognized. The conditions under which the syndicate supplied customers was much criticised, especially one requirement known as the "exclusive selling clause," which compelled consumers who did not buy exclusively of the syndicate to pay a fine of 50 pfennigs (12 cents) per ton in the form of increased prices on all coal which they did obtain from it. This clause was modified in 1907 on account of the inability of the syndicate mines to meet the demands, and customers were free to buy where they could. However, no guarantee exists that it will not be restored, since the modification in the selling clause merely provided that the fine should not be levied in cases in which coal was purchased elsewhere for the reason that the syndicate was incapable of complying with its running contracts or was unable to supply increased demands.

In relation to the coal and coke syndicates, it cannot be said that the iron and steel industry as a whole is at the mercy of these combinations, since all the large concerns possess collieries of their own. This movement started as soon as the dominating influence of the coal syndicate became apparent. All the leading blast furnaces and foundries either bought collieries outright or secured a share in them. In this way they became constituent members of the syndicate, reserving the coal needed for their own use and sharing in the profits of the syndicate's sales. Their advantage over competitors was that they were sure of their own supply of fuel, while in the periods of very active demand the competitors had to pay the syndicate prices and frequently even then could not obtain sufficient fuel.

In striving for the international markets the German iron and steel manufacturers are quite willing to expand the system of syndication. At the present time there are international syndicates in several products. The German coal and coke syndicates formerly had an arrangement with the Belgium coke syndicate by which French territory was divided between them, and occasionally the syndicate in one country would sell to the other coke for delivery in France.

Flint River Cotton Mills, Albany, Ga., have been incorporated with \$250,000 capital stock by E. F. Putney, E. E. Wetherbee, J. K. Pray and J. R. Wetherbee; will operate the former Albany Cotton Mills.

The Awakening of the South on the Tariff Question

[Evidences multiply that the South is fast awakening to the need of an adequate protective tariff. As straws tell the way the wind is blowing, so it can be seen by watching Southern papers that many of them are veering away from old-worn-out-moth-eaten-out-of-date-prosperity-destroying free-trade theories.—Editor Manufacturers Record.]

Is the President Changing His Mind on the Tariff.

[Knoxville (Tenn.) Journal and Tribune.]

President Wilson is now considering the proposition put up to him by citrus growers to recommend to the Congress the protection of the citrus industry of America by a tariff which would prevent foreign fruit from competing with American fruit. It is indicated in Washington dispatches that Mr. Wilson is at least giving the matter serious consideration.

The citrus industry has grown immensely in recent years, and will grow rapidly in the next decade if the growers are protected against foreign-grown fruit, especially that from Spain and Italy, now dumped on our markets and destructive of the growth of this great industry.

We of Florida, especially, should stand for an increase in the tariff on citrus fruits, and we should stand for protecting the industry in a way that would shut out competition with the pauper labor of Europe, just as it has been the policy of this Government to exclude the goods manufactured by European pauper labor for decades, and which policy will continue for all time to come.—Jacksonville Metropolis.

If a protective tariff is necessary for the citrus-fruit industry, why not for other industries? Why not make it general? A reason for a tariff that will give protection to one American industry would apply to all alike.

The Jacksonville paper says: "It has been the policy of this Government to exclude the goods manufactured by European pauper labor for decades, and which policy will continue for all time to come." That is putting it too strong. It was not the policy advocated by President Wilson and adopted by the Sixty-third Congress. That policy was openly and very decidedly anti-protection. The President and that Congress took such a long step in the direction of free trade that the tariff adopted was not even one for revenue. It was neither for protection nor even for revenue.

If the President is favoring considering a protective tariff for citrus fruits it shows that he has changed his mind; that he has gone off on a side-track of "a one-track" mind.

It may be that he has seen the error of his ways and that he is trying to screw his courage up to a point where he will confess that in opposing a protective tariff he has been in error.

[So long as the candle holds out to burn the vilest free-trade sinner may return. We are facing a world situation such as mankind never knew before. The wise man is the one who is not afraid to change his views when new conditions arise. The coward and the weak-minded take refuge in "consistency." The strong man is not afraid to be inconsistent when new light shows him the error of his former convictions. The sea captain whose convictions made him think he was steering his ship aright when the breakers ahead proved that he was steering to destruction would be a fool not to change his course while he still had the chance.—Editor MANUFACTURERS RECORD.]

Interests of the Masses Demand Increase in Tariff Duties.

[Washington (D. C.) Post.]

With his change of position upon the question of duties or no duties upon sugar, President Wilson returned to the true Democratic policy of a tariff for revenue—a policy endorsed by three generations of Democrats.

But the Democratic policy does not contemplate a stop at sugar. It did propose the use of the tariff in a broad way, a national way, a practical way, in a way that would provide the revenues required by the Federal Government, and the country and the party will be benefited if the Democratic President only insists that the Democratic Congress shall proceed to legislate

on the lines that the interests of the masses of the people of the country demand.

The revenues needed by the Government now can be provided through increase of the tariff duties, and, following the good work in repeal of the erroneous sugar legislation of two years ago, this increase should be made by the Congress during the present session.

Secretary Redfield has repeatedly pointed out the danger that will confront this country at the close of the European conflict through the "dumping" of surplus products of the labor of other countries.

Whether the rumors of immediate peace, which have been so numerous during the past week, are well or ill-founded, it stands to reason that exhaustion of supplies of men through the slaughter that the spring and summer months may witness will conduce to peace in the autumn or early winter, and then will come the pressure of European and of Asiatic commodities upon the markets of the United States.

That pressure will develop rapidly with the close of hostilities, and the industries of this country are liable to be greatly depressed through such importations before the Congress assembles in its next regular session.

With the certainty of such a condition weighing upon the industries of this country at the close of the war, and in view of the fact that a Cabinet official with such opportunities of acquiring information as to commerce and labor as has Secretary Redfield has already earnestly warned the country that steps should be taken to guard against this injury to American trade, it does seem that the President and the Congress should unite in the immediate effort to change the tariff duties so as to increase the revenues and by the higher duties save the capital and labor of the United States from unfair and ruinous competition of foreigners.

Good progress has been made on the military and naval preparedness legislation, and the Congress can well afford to devote a few weeks to the preparedness legislation that will ward off and guard from the dangers that threaten at the close of the war American manufacturers, merchants and workmen.

The revenues can be increased by revision of the tariff, and the many important interests of the country—interests that are factors in the prosperity of the country—can be saved from disaster through unfair foreign competition by that same revision.

The Congress should not adjourn until it has enacted such revised schedules into law.

It is a matter of national importance, one of such importance that it should be made a policy of the administration and pressed by it upon the Congress for speedy action.

Where Protection Is Justice.

[Winston-Salem (N. C.) Journal.]

Just now we have in mind one instance at least where every good Democrat, no matter how much he may believe in tariff for revenue or free trade, could advocate consistently the adoption of the policy of protection. We refer to the dyestuff industry. Dyestuffs are badly needed in this country, but it is exceedingly difficult to get moneyed men to enter the new and untried industry of dyestuff manufacturing in this country. Of course, if they knew the war would last for several years they wouldn't hesitate to invest the millions necessary to establish dyestuff manufacturing plants. But the length of the war in Europe is so uncertain that they don't know what day the doors of the Atlantic may be thrown wide open again to Germany's manufacturers who would flood this country with dyestuffs. And it stands to reason that the infant dyestuff industry in this country could not compete successfully with the old-established industries in Germany.

Therefore this country's tariff laws should be so framed as to give ample protection to the manufacturers of dyestuffs in order to encourage them to make the dyes that are so badly needed by our people.

[The light is breaking, the sun of protection begins to touch the high spots, and soon the South from mountain top to valley will be flooded with the light that

makes for prosperity. If "every good Democrat" is justified in voting for a high tariff on dyestuffs to save us from present conditions, why cannot he also vote for a tariff on many other manufactured products and minerals needing protection as much as dyestuffs? At last daylight is breaking in the home of the old free traders.—Editor MANUFACTURERS RECORD.]

Are Sugar Planters Alone to Be "Satisfied"?

[New Orleans (La.) Times-Picayune.]

There is no reason why the sugar tariff should be generally discussed just now during an overcrowded session, and those interested in sugar culture who were injured by the unwise action of Congress in this matter will be satisfied with seeing the duty restored or rather continued, instead of expiring in a few weeks, as was threatened.

[For the same reason those who were injured by free iron ore and other free products—of the farm, the mine, the forest and the factory—will be satisfied to have the free-trade features repealed, just as in sugar, without unnecessary waste of words. Are not the other producers entitled to be "satisfied" as well as sugar producers? Many of them were hit as hard as were the sugar people, and when the war is over death will be the fate of many industries if we do not now build a tariff wall of protection as safe as the wall of forts and battlehips upon which the nation is centering its thought.—Editor MANUFACTURERS RECORD.]

England Abandoning Free Trade.

[Wheeling (W. Va.) Intelligencer.]

The "White Paper" of the advisory committee of the British Board of Trade, recently made public, indicates that Great Britain is contemplating relinquishing her ancient free-trade policy and establishing her commerce on a protective basis. It has been the custom of the free-traders of this country to point to England's economic policy as an example of the successful operation of free trade, ignoring the fact that the per capita customs receipts from such articles as spirits, sugar, tobacco, tea and coffee alone were nearly 30 per cent. greater than the customs receipts from the entire import list of the United States.

Protective rates of duty were submitted to the British committee on such industries as paper manufacture, printed matter, cutlery, fancy leather goods, all forms of manufactured glass, china and earthenware, toys, brushes and brushware. Importations from Germany and Austria of table and lighting glassware and mechanical toys are to be prohibited for specified periods of time. The proposals not only contain plans for a commercial warfare against the Central Powers, but the duty rates submitted for imposition after the war are declared to be "nothing more than approximate indications of the amount of protection which the British firms thought necessary in each case."

Some days ago announcement was received in this country of the unanimous adoption of a resolution presented to the Vienna Chamber of Commerce looking to a trade combination between Austria and Germany for the protection of their commercial interests, and an alignment against the Allied Powers. These extensive preparations for warfare on enemy commerce have such deep significance to the people of the United States that only a return to the Republican policy of protection will give them a feeling of security. The Underwood law is permitting 74 per cent. of our imports to come in free of duty today. The present average rate of duty on all imports coming to our shores is less than 10 per cent.

[If the Democrats are wise, they will see the inevitable situation and adopt a strong protective tariff policy. Their last argument is gone when England turns from her old idol, free trade, to protection. It

matters not if this requires Democrats to accept a policy many of them have opposed merely because it was a Republican policy. Both parties constantly have to eat crow, and the war situation has changed the crow meat until it is now a savory broiled spring chicken dish. It is tempting enough to appeal to a jaded appetite, and nourishing enough to give great strength to all the industries of the South.

Do the Democrats prefer this spring chicken feast from now on, or a dish of stale crow meat as a steady diet permanently later on? Which will they choose?—Editor MANUFACTURERS RECORD.]

Where Are Our Statesmen?

[Houston (Tex.) Post.]

Are we to permit Germany to have a monopoly of the production of dyes?

Are we to find sources of potash that no European war can obstruct?

Are we to permit our supply of nitrate to depend upon an uncertain freedom of the sea?

These questions are of great economic importance. We have gradually become dependent upon other nations for products of prime necessity. It is admitted that under certain conditions we can supply our home demand, but not under ordinary conditions.

To create domestic sources of supply, we are told, would require a protective policy relieving such products of foreign competition. And that would renew again the old question of free trade or privilege.

At present we are tending to the position that where a foreign country can produce something more cheaply than we can, it is best to buy it abroad and exchange for it something that we can produce at less expense. That is the free-trade idea, and is regarded by economists as the true principle.

But what about a suspended commerce, entailed by war, by which we are deprived of articles of prime necessity which can be had only from a country whose doors are closed against us?

To create a domestic supply, a privilege in the form of protection will have to be granted. To stand by our ideals and avoid privilege, we must take the chances and suffer what the contingencies of war inflict upon us.

What solution of the dye, drug, potash and nitrate problems have our statesmen to offer?

["Our statesmen?" Where are they? Apparently they are as scarce as dyestuffs. The men who rattle in chairs once filled by statesmen are afraid to move because of coming elections. We are tied hand and foot in the dye industry, which affects the industrial activities of millions of people, and yet Washington does nothing but prate about an imaginary dye production which as yet is only a figment of the imagination.

Incomprehensibly slow in grasping the need of national preparedness to prevent war, Washington is equally as slow in realizing the need of industrial preparedness to prevent poverty.—Editor MANUFACTURERS RECORD.]

The Sugar Bill Should Pass.

The duty on sugar is a revenue duty. If sugar goes on the free list May 1, as provided in the Underwood tariff law, there will be an annual loss of \$40,000,000 in revenue. The need of revenue, by reason of the war and the necessity of preparedness, has been greatly increased since the enactment of that law.

The chairman of the Ways and Means Committee has reported a bill repealing the free-sugar clause. The bill should pass.—Louisville (Ky.) Times.

[Of course, the duty on sugar is a revenue measure, but it is also a protective tariff measure. Did not Congressman Kitchen of North Carolina, according to the statement of Mr. Paul J. Christian, Washington representative of the cane-sugar growers, "show a disposition to help Louisiana and to correct the injustice that was done that State by the Underwood tariff," and did he not promise "that the free-sugar clause never would become a law?" Now, if Congressman Kitchen could "help" the sugar producers, can he not help the mineral interests of his own State, which, if adequately protected, would become a center of vast mining activity and prosperity? And what is true in this particular of North Carolina is true of other mineral regions of the South, and what is true of minerals

is true of iron and steel and lumber and other things.—Editor MANUFACTURERS RECORD.]

A Revenue Duty.

[Jacksonville (Fla.) Times-Union.]

When the Democrats in turn captured the Government provision was made at the insistence of the President for placing sugar on the free list by a gradual decline of duties.

From the Democratic standpoint, that a tariff is imposed for revenue only, this was a bad blunder. The duty on sugar furnished about one-sixth of all the revenue collected through the custom-houses, and it furnished a revenue that did not cost the people half as much in proportion to the amount collected as did the average duty. The President made a mistake in insisting on free sugar, and Congress made a mistake in yielding to him. By now favoring the retention of the duty the President admits his mistake, and it is a manly thing in him to admit it.

The truth is, sugar was placed on the free list in obedience to popular clamor, and unintelligent popular clamor at that. The shouters were after the sugar trust, and those who cared for the shouting rather than for the best interests of the people were for giving free sugar to them. They got it, and then they found they did not want it, and so it will be taken away.

[Yes, and many other things were put on free-trade list "in obedience to popular clamor." Now, if the arguments for free sugar were without foundation, why not change many other tariff lists and save other industries as well as sugar.—Editor MANUFACTURERS RECORD.]

The Leaven Is Working.

[Wheeling (W. Va.) Intelligencer.]

The MANUFACTURERS RECORD of Baltimore, a journal devoted to the industrial and commercial interests of the South, a publication of standing and influence, affects to see a brighter day dawning through the abolition of the mental slavery which, to a large extent, has enchained the economic thought of the South. It bases these hopes on significant signs, indicative of the awakening of the South to the supreme importance of protection to the industrial interests of the country. Among these signs it notes "the growing disposition of Southern papers, heretofore strong in their free-trade proclivities, to give favorable attention to the need of an adequate tariff protection to local as well as at national industries. They are beginning to see a new light, and many of them the taking a position which means that henceforth the South will be able to look upon protection as it never has been able to do before."

The great trouble with the Southern people has been the subordination of their thoughts and wishes to that of the political leaders of that section. It was the politicians and the demagogues that led the people into the Civil War, and they have allowed themselves to be led ever since. It is gratifying to see such tangible signs of a change as the MANUFACTURERS RECORD recounts. The South's prosperity is due almost entirely to the protective tariff, yet it has continued to array itself solidly on the side of free trade, and we are inclined to believe it will persist in its contradictory course for many years to come. Meanwhile the Republican party will continue to conserve its best interests in spite of its negative action.

AUGUSTA TO BE REBUILT BETTER THAN BEFORE.

Spirit of Determination to Rise Above Disaster and Meet the Situation Without Outside Aid.

Augusta, Ga., March 24—[Special].—"Augusta is undaunted. We have had floods every decade or so, and, harassing as they were, they never wrought such havoc as the fire, which, on Wednesday night of this week, burned out one of the chief business sections in the heart of the city and destroyed hundreds of homes. But, great as the catastrophe is, we will rise above it

and build a greater and better Augusta out of the ruins. We are at last protected from floods by the \$2,000,000 levee recently constructed on the city side of the Savannah River, and, so far as it is within human power, the new Augusta will be reconstructed to withstand fire as well as flood."

Such was the statement of Mayor John T. Littleton of Augusta to the MANUFACTURERS RECORD representative as he sat in his office this morning reading telegrams of sympathy and offers of assistance which were pouring in from all parts of the country.

Mayor Littleton went over the situation with the correspondent. The fire started in the Dyer Building, corner of Broad and 8th streets, about 6 P. M. Wednesday, March 22, and, fanned by a strong wind from the west, devastated in 10 hours or less an area covering 118 acres containing 32 city blocks, on which were 764 buildings, 138 business structures and 526 residences; rendered 3000 people homeless and caused a damage of from \$3,000,000 to \$5,000,000. These figures were secured from the city tax assessor, and the actual tax valuation of the buildings destroyed was \$2,250,000.

One of the largest losses outside of the buildings was that of approximately 20,000 bales of cotton. Nine of the leading cotton firms affected by the fire reported an aggregate loss of 18,500 bales, and there are several other minor losses not yet accounted for. The total value of cotton destroyed will probably reach \$1,000,000. The cotton was, for the most part, fully insured.

"With all these serious losses, as I stated," Mr. Littleton continued, "Augusta is undaunted. Most of the buildings and their contents—particularly the business buildings—were covered by insurance. The greatest suffering is among the poorer classes of people, white as well as colored, who lost everything, and few had insurance. A relief fund, however, is being raised, and before the week is over \$50,000 will be available for the sufferers."

"This fund is being raised by Augusta citizens, and I do not think we will have to ask for outside aid, but wish to thank those from other cities who have already contributed. We have found temporary homes for all the needy and food is plentiful."

"Within a week or so, after the insurance claims are adjusted, there will be several millions of dollars available from that source, which will doubtless be used to rebuild the business places and homes. This new flood of money will start building activities, and people here will undoubtedly be very busy with rebuilding. And when all this business is attended to Augusta will be a better city than ever."

A fine spirit of optimism is evident among the citizens. Hundreds of business men, deprived over night of their homes, offices and office facilities, were going about the streets today, doing business, as one man stated, "from his pockets." On Thursday morning there was a scramble for all available office room, and by noon today most of the office seekers had been located.

Augusta is swarming with insurance adjusters, architects, contractors, material men and sightseers. Of course, very few building projects have been definitely decided upon to date, but the prevailing opinion and expressions are to the effect that all the business buildings will be replaced with more substantial structures. Even today several contracts for new homes were agreed upon. The city and county forces are co-operating in the blasting down of the menacing brick walls and in clearing the debris from the streets.

It was reported today that St. Paul's Church, 125 years old, would be rebuilt at once on the old site and the old structure would be duplicated as nearly as possible. An architect has been commissioned to draw the plans. The church property was valued at \$110,000, with \$65,000 insurance.

There will not be much actual detailed news of the rebuilding of Augusta for several days, probably weeks. When things do open up, however, they are expected to open up big, for Augusta realizes that it has a large job before it, and the disposition is manifested to get at the work early and complete it without undue delay.

Changing Sentiment on Tariff.

[Athens (Tenn.) Athenian.]

If it, the South, could vote on the tariff today it would show a huge majority for the protective policy,

General Prosperity of South Aided by Amazing Agricultural Advance

[Two weeks ago, in an elaborate survey of the progress of diversified agriculture in the South, the Manufacturers Record showed that out of a total gain in value for the United States in agricultural products over 1914 of \$526,000,000, over \$317,000,000, or 60 per cent., was in the South, and that the total value of the agricultural products of this section last year was \$3,600,000,000, of which \$2,850,000,000 was the value of diversified farm products and \$750,000,000 the value of cotton. These facts have attracted wide attention throughout the country. They have called forth strong editorials from many leading papers North and South, and have thus been a powerful advertisement of this section. Evidencing the general interest aroused are the following editorial extracts from a few of the many papers which have discussed the subject.—Editor Manufacturers Record.]

South Takes the Lead.

[Atlanta (Ga.) Constitution.]

In an amazing story of the increase in the total value of all agricultural products in the United States in 1915, as compared with 1914, Editor Richard H. Edmonds of the Baltimore MANUFACTURERS RECORD shows that more than 60 per cent. of the total gain of \$526,070,000, or to put it in figures, \$317,209,000, was in the South.

This marvelous increase in production is attributable to 16 States, beginning with West Virginia and Maryland on the east and going through Missouri and Texas on the west. In other words, one-third of the States of the Union produced last year nearly two-thirds of the entire country's increase in agricultural production.

This remarkable record made by the States of the South may be attributed almost directly to the cotton crisis of the fall of 1914, when, following the outbreak of the European war, cotton went to 6 cents and even lower, and starvation almost stared many of our farmers directly in the face. They had failed to make their food at home, and they were confronted with the alternative of doing without it or giving away their cotton.

Not to be caught again in that predicament, Georgia farmers and farmers throughout the South went to work in 1915 and planted and harvested more food crops for man and beast than ever before in all the agricultural history of this great agricultural section. They made less cotton and more food; cotton went higher and they had food products to sell. That is the real secret of it.

Conditions which confront the agricultural South today are not materially different from those of the spring of 1915. Cotton is a little bit higher in the market; that is all. If Southern farmers continue to play the ostrich as they have in the past, and blind themselves to results which experience has shown they cannot expect to escape, they may reverse this record by excessive cotton planting in 1916.

But if they will make their foodstuffs first, even if only enough for home consumption, and let cotton be the surplus crop, as it should, they may repeat the marvelous record of 1915 and build another agricultural increase surpassing again the achievement of all the other 32 States, North, East and West.

Where the farmers of the South brought to this territory and to their own pockets last year more than \$300,000,000 increase over the year before, there is no answer to the argument. What they did then they can do again by pursuit of the same methods. But if they abandon those methods and invoke the all-cotton "fetich" they may as well expect and prepare for conditions not unlike those which the beginning of the European war brought upon them.

The problem with its clear solution experience teaches, is before them. The fall harvest will tell the story.

Wall Street's Congratulations to the South.

[Wall Street Journal.]

In the MANUFACTURERS RECORD is an analysis of the crop returns of the Southern States, marvelous in the light of the desolated South of 50 years ago.

All farm crops of the United States, exclusive of animal products, in 1915 are placed at \$6,788,906,000. Of this total, \$2,607,349,000 was contributed by the South.

Crops of the whole country last year were worth \$526,070,000 more than in 1914. The farms of the South made 60 per cent. of this gain. Greeley's slogan seems no longer applicable. Go South, young man. Go South!

When animal products are considered the total new wealth created by this region in the past year rolls up to

the enormous sum of \$3,600,000,000. This means more goods purchased from the manufacturing district, continually affecting wage-earners and the holders of industrial and railroad securities.

But in all the analysis and comparisons with other sections of the country, there is nothing so striking as the value of the different crops. These figures are striking and important because they show that the diversified crops were worth twice as much as the most valuable cotton crop that ever whitened the fields of the South. Adding crops and animal products together, the cotton crop of this past year represented less than 21 per cent. of the total. The South can no longer be called a one-crop country.

Such farming does not mean less cotton, but more, on less land and at less outlay. It means the farm families become more nearly self-sustaining and on a cash basis. This is a more desirable condition than the one-crop system, whereby a farm family lives a year on credit on the strength of what they hope to raise. The business world with goods and transportation to sell is interested in just such improvement in the purchasing power of any section, whether it be South, North, East or West. Wall Street joins hands with the South, as with any other section which is making good and earning credit.

The South's Agricultural Advance.

[Birmingham (Ala.) Age-Herald.]

The Baltimore MANUFACTURERS RECORD of this week has for the subject of its "feature" article "The Amazing Agricultural Advance of the South," in which the Government's crop statistics are digested and presented in concrete form.

The South's crop statistics are highly encouraging, and the incentive to do better this year will not lose its force. The banker and the merchant are co-operating heartily with the farmer in the crop diversification movement, and if the farmers of the South will continue for one or two years more to give their attention to food crops, "this section," as the MANUFACTURERS RECORD says, "will forever get beyond the one-crop system, which formerly prevailed," and that will make a new era in the South's advance, whose significance cannot be overestimated.

Cotton no Longer King.

[Philadelphia (Pa.) Inquirer.]

It is interesting to learn from statistics gathered by the MANUFACTURERS RECORD of Baltimore that cotton no longer rules the South, but that agriculture is becoming varied. It makes the astonishing statement that more than three-fifths of the gain in the values of farm products last year over 1914 was in the South; that the South's share of values for all products was \$3,600,000,000, of which only about \$750,000,000 was represented by cotton—that is to say, cotton represented less than a fourth of the total value.

These statements are backed by official and other figures which are to be taken at face value. They show that the South has stopped its old plan of depending on a single crop and is now producing a large variety of agricultural commodities. It is a little astonishing to find that Georgia led Pennsylvania in its farm products, that it almost equaled Kansas and was far ahead of California. This is the more satisfactory when it is remembered that the cotton crop last year was unusually light and the price low, owing to the war. Some of the greatest consumers of cotton were practically cut off from any supply, and the South suffered accordingly.

These figures are interesting because they show that

the South is learning, although it has taken a long time to do so. There will be especially joy in the North over this situation, for it has been maintained here for generations that the South has failed to take advantage of its opportunities. This diversity of agricultural interests foreshadows an increase in general prosperity, and with the increased wealth the South ought to enter upon a constructive policy which will put it on a plane with the rest of the country.

The South Awakened.

[Washington (D. C.) Post.]

References to the South as the great cotton-producing area of the nation have been made so frequently and for so long a time that the rest of the country has gained the impression that cotton is the basis for all Southern activity. As a matter of fact, however, the South, according to recent figures collected by the MANUFACTURERS RECORD, produced \$3,600,000,000 of all agricultural products last year, and of this, only about \$750,000,000 was represented by cotton. Cotton therefore comprised but little more than one-fifth of the total agricultural products.

The South has awakened. It is alive industrially and agriculturally. It is not merely keeping pace with the rest of the country, but is beginning to set the pace.

The South is growing more corn. It is growing more livestock than ever before in its history. It is advancing industrially. Not only is its own future assured, but the South is adding to the prosperity of the whole nation.

The South's Gain.

[Tampa (Fla.) Morning Tribune.]

The MANUFACTURERS RECORD has compiled, with its usual accuracy, a statement showing the amazing agricultural advance of the South, as compared with the rest of the country. The figures which the MANUFACTURERS RECORD deduces are summarized as follows:

"In 1915 the gain in the value of all farm crops in the United States over 1914 was \$526,070,000.

"Of this gain, \$317,209,000, or a little over 60 per cent., was in the South, an amazing illustration of the increase in the diversification of Southern agriculture.

"The gain in the entire country, outside of the South, was \$208,861,000, or \$168,400,000 less than the gain in the South.

"The percentage of increase for the South in 1915 over 1914 was 13.85 per cent.

"The percentage of increase for the rest of the country in 1915 over 1914 was only 5.25 per cent."

The MANUFACTURERS RECORD comments that the figures show amazing gains for the South and indicate that the prosperity of this section, in an agricultural way, is only just beginning.

A Georgia Record.

[Atlanta (Ga.) Journal.]

"The value of Georgia's farm crops last year—\$233,506,000—was more than \$1,000,000 in excess of the value of Pennsylvania's \$32,000,000 in excess of the value of Michigan's, \$54,000,000 in excess of Wisconsin's, nearly \$13,000,000 in excess of South Dakota's and \$21,000,000 in excess of California's.—MANUFACTURERS RECORD.

This comparative record of Georgia's resources and prosperity becomes the more impressive when it is remembered that in 1915 the State's cotton crop was exceptionally small and the prices therefor exceptionally

low. Despite a heavy reduction in both the size and value of what was formerly our great staple, we excelled many States long famed for their bountiful output of foodstuffs. It would be nearer the truth, however, to say that this was achieved, not in spite of restricting the cotton acreage, but because of that restriction. The land thus released for food crops and the better balanced system of farming thus encouraged led to one of the most fruitful and prosperous autumns the State ever has known.

The value of Georgia's crops in 1909, when cotton was in the ascendant, amounted to only \$226,595,000—nearly \$7,000,000 less than the value of last year's crops, when cotton was in the decline. In 1914, with a cotton crop of approximately 16,000,000 bales, our farm products were worth \$34,500,000 less than last year, with a cotton crop of only about 11,000,000 bales. As of Georgia, so of the South as a whole. The aggregate value of the South's agricultural output in 1915, exclusive of animal products, was \$3,600,000,000. In this vast total the value of diversified crops was more than two and a half times as great as that of cotton, including cottonseed. Furthermore, as the MANUFACTURERS RECORD points out, the value of the South's food crops in 1915 was nearly twice as great as the most valuable cotton crop ever produced.

The lesson of these figures is unmistakable. The South's progress and welfare lie in diversified farming and in deliverance from the all-cotton system. If the wise policies of 1915 are pursued this year we shall have another twelvemonth of golden prosperity and shall be still nearer economic independence.

Unparalleled Increase in Farm Values in South

[Muskogee (Okla.) Times-Democrat.]

The MANUFACTURERS RECORD, in its current issue, publishes an editorial regarding crop values of the United States and lays especial emphasis on the amazing advance in agricultural values in the Southern States. The MANUFACTURERS RECORD says that the value of farm crops in the United States increased in 1915 over 1914 more than \$500,000,000, and of this gain, that more than \$300,000,000 was shown in the Southern States. The exact figures on a percentage basis are a little over 60 per cent. These figures relate to farm crops as distinguished from agricultural products, and do not include livestock. The MANUFACTURERS RECORD says that the value of livestock in the United States in 1915, according to the census, show \$3,849,000,000, and of this, one-third is credited to the Southern States. In this table of farm values, the value of farm products in Oklahoma for the year 1915 is placed at a little over \$173,000,000, which is more than the combined farm products of Wyoming, New Mexico, Arizona, Utah, Nevada and Idaho, and is only exceeded by the value of agricultural products in 16 other States.

It is interesting to note in this connection that Oklahoma is placed ahead of all Southern States in the value of farm products except Texas, Georgia and North Carolina, where the tremendous cotton crop brings the money value up to high figures. A further table in the MANUFACTURERS RECORD shows that Oklahoma farm crops for 1915 were worth \$40,000,000 more than in 1909.

A Pliable Crop System.

[Paducah (Ky.) Evening Sun.]

The MANUFACTURERS RECORD publishes an elaborate review of the value of the farm products of the South last year. * * *

The entire South has learned that through diversification and through the realignment of crops to meet conditions of the year it can keep on the even keel of financial prosperity. Cotton is, of course, a money-making crop. It is a staple and necessary article, and the period of derangement will be but temporary. It could not be considered wise to definitely abandon it as the prime crop of the South, but there is much of the cotton land of the Southern States available for food crops that would return a more profitable yield if planted in them. This is particularly true of crops that can be coupled with the raising of livestock and used in that way, or in other ways for home consump-

tion. Food for stock is more profitably grown than purchased, and food crops at a time when the demand for food is paramount and the market for cotton is slack are immensely profitable.

The same rule applies to our tobacco-raising sections, and it will be noted that Kentucky failed to progress in the value of crops to the extent that her more Southern neighbors did chiefly because tobacco acreage was not diminished in the face of a poor market. Here again abandonment of tobacco would be ridiculous, but the importance of keeping a reserve acreage for other things cannot be over-emphasized.

So long as a nation imports food there will always be a market for food produced at home, and there is not always a market for other materials.

The South's Road to Wealth.

[Wilmington (N. C.) Morning Star.]

The grounds upon which the MANUFACTURERS RECORD emphasizes the South's \$3,600,000,000 crop record in 1915 are inspiring within themselves, but such an amazing achievement would be lacking in its real inspiration if the South fails to heed this injunction to make greater achievement along a line clearly marking out a new agricultural era for this marvelously productive section:

"If the farmers of the South, through the hearty co-operation of land owners and every business man, banker, merchant and manufacturer will continue for one or two years more to give the attention to diversified farming shown in this presentation of amazing improvement, this section will forever get beyond the one-crop system which formerly prevailed, cotton will then become a surplus crop, grains, grasses and cattle will be found in abundance in every part of the South, and universal prosperity of farmers, and all interests dependent upon farmers will prevail as never before."

The Star repeats it because the main lesson is the practical demonstration of the South's diversified crop potentiality shown in such a net result as \$2,800,000,000 in diversified crops in addition to a cotton production of \$750,000,000. The one-crop idea surely gets lost as a value proposition alongside other crops producing nearly four times the value of our boasted cotton crop. The point in it all is that the MANUFACTURERS RECORD briefly but impressively cites us to the practical co-operation that will score further for the South's agriculture.

The greatest constructive work that can be done for the South lies in promoting a diversified agriculture which resulted last year in creating \$317,200,000 of the \$526,000,000 increased farm crop values of the entire United States. In other words, Southern farming on diversified lines resulted in 60 per cent. of America's increased farm crop value, compared with 40 per cent. of all the balance of the country.

Go South, Young Man.

[Charlotte (N. C.) News.]

If Greeley were alive today he would have to point his finger in a different direction when directing the course of young men of the nation to the storm center of activity.

"Go West, young man" would be changed to "Go South," for the New South is today the most rapidly developing and fastest wealth-forming section on the face of the globe.

When the war came along and knocked King Cotton from his throne, sending the price of the staple down to 6 cents and causing hundreds of millions of dollars in loss to Southern farmers and Southern business in general, the blow, while severe, was not a knock-out by any means.

On the contrary, it carried with it a lesson which has borne rich fruit in unprecedented profits. In every paper and on every lip was heard the counsel to diversify agricultural operations in order that never again could the whole South be so severely hit because of a dependency on one line of business. And the lesson went home. It stuck. It was put into actual operation in North Carolina, in South Carolina, in Georgia, and in all the balance of the group of Southern States.

If you wish to know the result turn to the page in

this paper today which carries a wonderful story from the MANUFACTURERS RECORD on the results of a year of diversified agricultural pursuits in the South.

The diversified products of the whole South for last year were four times as great in value as cotton.

The grand total for all crops of the South last year was \$3,600,000,000. Of this gigantic grand total, the sum of \$2,850,000,000 was for crops other than cotton.

This will give the reader an idea of just how far the policy of diversification has been carried.

It means a greater independence. It means broader freedom. It means stupendous increases in wealth. This diversification policy is like an insurance policy. It insures this section protection against ruin which might follow depression in any one line of business. The South is no longer dependent upon King Cotton. It has changed its fealty to other thrones. It has decided that it is cheaper to raise its own hay, its own ham and bacon, its own corn and wheat and mutton and beef than to import these things from Western States.

In short, the South is eating at home and living at the same place, and it has money in its pocket, with more coming in.

South's Fine Record.

[Chattanooga (Tenn.) News.]

Over 60 per cent. of the total increase in value of farm products in the United States in 1915 over 1914 was in the Southern States. The increase for the country was \$526,070,000, while that for the South was \$317,200,000. The total value of the farm products of the South in 1915 was \$3,600,000,000, and of this the value of diversified farm products amounted to \$2,850,000,000, while the cotton was worth \$750,000,000.

These figures, from the MANUFACTURERS RECORD, give some idea of the advance of the South along agricultural lines.

The percentage of increase in value of farm products for the South in 1915 was 13.85, while for the rest of the country it was 5.25.

The chief lesson of the figures given is that diversified farming had tremendous gains in the South last year, and despite the hard season for cotton, the South marked up a banner record for agricultural value. We should continue to give attention to corn, livestock and wheat. There is no longer any doubt that diversified farming can be practiced with great success. There is not even a doubt that livestock raising can be conducted profitably, since several States have eradicated dangerous cattle pests.

Surprising Figures.

[Winston-Salem (N. C.) Twin City Daily Sentinel.]

The MANUFACTURERS RECORD this week publishes an elaborate review of the value of the farm products of the South last year.

Comparatively few people perhaps have an adequate realization of the actual value of Southern farm products.

The figures along this line are indeed astonishing. They show that the percentage of increase in the South has been considerably ahead of that in other sections, and they indicate that the crop diversification movement is growing steadily in this section. That is an especially encouraging fact, for it is sure to mean much to the South.

South Is Prosperous.

[Gadsden (Ala.) Evening Journal.]

An elaborate review of the value of farm products is furnished this week by the MANUFACTURERS RECORD. It shows astonishing figures.

The South is prospering. It is prospering as it never has prospered. It is prospering as no other section of the country is prospering. Despite the great decrease in the value of the cotton crop last year, by virtue of war condition, compared with the big crops and high prices for years previous to the war, the South has shown a surprising increase in value of farm crops.

Secretary Lane's Views on Iron and Steel

HE NOTES THE EXHAUSTING DRAIN ON LAKE SUPERIOR ORE, BUT FAILS TO TAKE ACCOUNT OF SOUTHERN ORE POTENTIALITIES

[Special Correspondence Manufacturers Record.]

Washington, D. C., March 25.

The United States Geological Survey and other bureaus of the Department of the Interior are co-operating in a general study of the resources of the South. While there are vast undeveloped resources of iron ore in the South and Southwest, Secretary Lane of the Interior Department taking the ground that the time is not far distant when Lake Superior ores will be practically exhausted, favors an increase in the importations from Cuba and South America.

Authority has been given to the correspondent of the MANUFACTURERS RECORD to use the following statement with reference to iron ore and pig-iron as representing Secretary Lane's present view:

"In 1880 about 7,000,000 long tons of iron ore, valued at \$17,500,000, were mined in the United States, as compared with 60,000,000 tons in 1913, valued at about \$130,000,000. The production of pig-iron increased in the same period from less than 4,000,000 tons to more than 30,000,000 tons, the value of which in 1913 exceeded \$450,000,000. The United States leads the world in the production of these commodities, iron ore and pig-iron, and produces annually about 40 per cent. of the world's supply of iron.

"Comparatively little iron ore is imported into the United States—less than one-half of 1 per cent. of the quantity annually mined. Moreover, the exports of iron ore from the United States nearly offset the imports, so that the United States is self-sufficient so far as the production of iron ore is concerned. Such ore as is imported comes mainly from Cuba, Sweden, Newfoundland, Canada, Spain and Chile. It is possible to import high-grade iron ores, such as are received from the above countries, for use along the Atlantic seaboard when ocean freights are low and there is no tariff on the ore. Even under these favorable conditions, however, foreign ore rarely gets beyond the tide-water furnaces.

"The United States is abundantly supplied with iron ore, yet there are excellent arguments in favor of encouraging imports of ore from Cuba and South America. Iron ore forms the basis of the largest manufacturing industry in the United States. The profits to both labor and capital are made from the manufacture and sale of iron and steel products rather than from iron ore mining, therefore, so long as the United States can utilize the cheap ores from Latin-America and export to those countries as well as to Europe the fabricated iron and steel goods, there is reason to favor the continuance of these conditions. Moreover, since there is little good coal near the largest deposits of iron ore in South America, it may never be feasible to establish the manufacture of iron there. The iron ore of that continent will find a market either in Europe or in the United States; therefore, whatever is commercially available to the United States should serve a double purpose if sold here, viz., in increasing trade between the United States and South America and in conserving the ore supplies of the United States.

"So far as exports of either iron ore or pig-iron from the United States are concerned, there is little reason for their encouragement. Twenty-eight States are regular producers of iron ore, and several others contain deposits of potential value. The States in which iron ore occurs may be conveniently grouped into six geographical divisions, namely:

1. Northeastern States—Massachusetts, Connecticut, New York, New Jersey, Pennsylvania and Ohio.
2. Southeastern States—Maryland, the Virginias, Kentucky, Tennessee, North Carolina, Georgia and Alabama.
3. Lake Superior States—Michigan, Wisconsin and Minnesota.
4. Mississippi Valley States—Iowa, Mississippi, Missouri, Arkansas and Texas.
5. Rocky Mountain States—Idaho, Montana, Wyoming, Colorado, New Mexico, Utah and Nevada.
6. Pacific Slopes States—Washington and California.

"The Lake Superior division is by far the most important, and it is followed in order by the Southeastern division and the Northeastern division. The Mississippi Valley and the Western divisions are at present

of minor importance, although it is certain that at no distant date California and Utah are destined to become large producers of iron ore.

"Recent estimates credit the United States with about 7,500,000,000 tons of iron ore of present-day commercial grade, of which about one-third is in the Lake Superior district. The rest of North America, including Newfoundland, Canada, Mexico and Cuba, is credited with about 7,000,000,000 tons. South America is credited with about 8,000,000,000 tons, and may have more, and Europe with about 12,000,000,000 tons, making a total of almost 35,000,000,000 tons of iron ore now known to exist on three continents bordering the Atlantic Ocean. It thus appears that the United States possesses more than one-fifth of this available supply.

"Immense as this available supply may seem at first glance, it is not sufficient to prolong production for many decades at the rate of increase in consumption of ore that has obtained thus far. The draft on the ore reserve of the Lake Superior district is relatively much heavier than on those of the other districts on account of the possibility of open-pit mining on the Mesabi Range. The Lake district now produces about four-fifths of the iron ore mined in the United States, and it has been estimated that if this proportion is maintained the known ore reserves of present commercial grade in the United States portion of the Lake Superior district cannot last much beyond the year 1930. Happily, however, there are factors that, if taken into consideration, indicate the possibility of a considerable prolongation of the life of the Lake Superior iron-ore supplies and of the whole United States, for that matter.

"The important factors bearing on the prolongation of the life of iron-ore reserves of the United States may be summarized as follows:

1. Methods of conservation of ore and metal.
2. The steady accretion of the permanent supply of metal and the consequent reduction in rate of increase of production.
3. Imports of ore from Cuba and South America, which must logically be regarded as a portion of the immediately available reserve, since such ores can be used most profitably and economically in the United States.
4. New discoveries of ore deposits.
5. As the price of pig-iron increases, lower grades of iron ore will become suitable for use, thus vastly increasing the tonnage of reserves available.
6. Possibility of metallurgical improvements which will enable pig-iron to be derived economically from low-grade ores.
7. The utilization of titaniferous iron ores, of which there are large deposits not now available by reason of the metallurgical problems involved.

"Interest in this problem has already been awakened. Publications of this department containing estimates of iron-ore reserves based upon geologic field work show that, while relatively great, the reserves are actually limited, and statistical canvasses extending back for many decades also show the phenomenal increases in consumption of ore, so that data are available from which calculations have been made with reference to the life of the deposits.

"Bureaus of the Interior Department may further the work of iron-ore conservation still more. Studies should be made bearing upon problems of beneficiating iron ore, processes by which enormous supplies of ore of grade too low to be utilized under present conditions may be made available. Here also is an opportunity for the invention of metallurgic processes by which pig-iron may be made commercially from ores of lower grade than at present used, and ores may be smelted electrically in regions where cheap water-power is available but good coal is scarce."

[Secretary Lane is, we think, looking at some phases of the iron situation from a wrong viewpoint, but there is one statement made by him based on reports of the United States Geological Survey worthy of special attention. It is the following:

The Lake district now produces about four-fifths of the iron ore mined in the United States, and it has been esti-

mated that if this proportion is maintained the known reserves of present commercial grade in the United States portion of the Lake Superior district cannot last much beyond the year 1930. Happily, however, there are factors that, if taken into consideration, indicate the possibility of a considerable prolongation of the life of the Lake Superior iron-ore supplies, and of the whole United States for that matter.

We think Secretary Lane has underestimated the probable life of the Lake Superior ore fields, of the grades of ore now available, for he puts it in 1930, or only 14 years hence, and we are quite sure it will far outlast that period; but every iron and steel man knows that there is a tremendous exhausting drain demand going on which daily lessens the strength back of the iron and steel interests dependent upon these ores. Some Lake Superior iron men familiar with the situation feel that no larger development of iron plants to use these ores should be made or can be made without endangering the future of the industry.

On the other hand, we cannot agree with Secretary Lane as to the wisdom of iron ores being on the free list, and this, we take it, is the meaning of his statement on that point. Iron ores were put on the free list for the benefit of a few big Eastern steel works, thus helping to strengthen the hold of the East against the South, whereas we believe that free ores are an injury to the South, and that it is the duty of the Government, from the business point of view as well as from that of national safety, to encourage to the utmost the building up of the iron and steel interests of the South and Southwest.

This administration will make a fatal national blunder, one for which history can offer no apology, if it fails in the slightest to see the danger of the existing situation in iron and steel, and in using every legitimate means in its power to change these conditions. Until President Wilson and every member of his Cabinet come to a full realization of this situation and do all in their power to overcome it, they will sadly fail to meet an issue vital to the safety of the nation.—Editor MANUFACTURERS RECORD.]

Additions to Appalachian National Forest.

The National Forest Reservation Commission has approved the purchase by the Government of 47,000 acres of land, comprising 61 tracts in the Appalachian and White Mountains. In Macon and McDowell counties, North Carolina, a number of small tracts were acquired which together comprise 2000 acres. In Virginia the purchases were mostly in Shenandoah, Amherst, Augusta and Rockbridge counties, where additional acreage amounting to 7500 acres was acquired. Some 3000 acres of the new lands are situated in Polk, Carter and Unicoi counties, Tennessee, while in Rabun and Fannin counties, Georgia, about 1100 acres were acquired, and in Oconee county, South Carolina, 300 acres.

Unless provision is made by this Congress for additional funds, the Forest Service reports, the work of purchasing additional areas cannot be continued. In order to keep the machinery intact and to make reasonable progress it is essential that at least \$1,000,000 be available for the fiscal year 1917 and \$2,000,000 for the fiscal year 1918. It is understood that proposals have been made in the Senate to include an item appropriating these sums in the agricultural appropriation act for the fiscal year 1917 when it is under consideration by that body.

\$7,400,000 Increase of the Texas Company.

The managing officials of the Texas Company have completed all arrangements for their recently announced increase from \$37,000,000 to \$44,400,000. Referring to this \$7,400,000 additional capital, E. C. Lufkin of New York, the company's president, writes to the MANUFACTURERS RECORD as follows:

"The authorized increase in the capital stock of the Texas Company was made for the purpose of providing for the rapid growth of our business in all directions, and is not to be used for any specific improvement. As regards the shipyard at Bath, Maine, this yard has been leased by our interests and four ships will be built there promptly, each about 410 feet long and having capacity of about 9100 tons."

Three Thousand New Wells to Be Drilled In Oklahoma's Shamrock District

GREAT ACTIVITY IN LATEST EXTENSION OF THE CUSHING OIL FIELD—
PRESENT PAYROLL \$50,000 A DAY.

[Special Correspondence Manufacturers Record.]

Shamrock, Okla., March 27.

The newspaper men of Oklahoma, when they visit Shamrock on May 14, following the annual press meet at Tulsa, will not lack for genuine oil field sights and scenes, for at the present time there is just starting the busiest drilling campaign in the Shamrock district that the Cushing oil field has ever known. It is being participated in by all oil-producing concerns who have the increasing price of crude oil as an incentive to rapid development, and with a total of 3000 wells to be drilled within a radius of two and a half miles of town, the development will necessarily continue a long time.

The first well in the Shamrock territory was drilled in by the Gypsy Oil Co., a shallow or Layton sand well, six months ago. The first deep-sand well was drilled in 90 days ago by the Hill Oil & Gas Co. Both of these wells were considered among the most important tests ever started in efforts to locate an extension from the old Cushing field, and both were successful. Now, in the Layton sand pool there are 75 to 100 producing wells, while in the deep sand there are six, and it is the deep-sand development that has inaugurated such a busy drilling campaign.

Some idea of the rapid development now going on here may be gained from the fact that there are 1000 rig builders now at work in the Shamrock territory. It is possible for these 1000 experienced workmen to complete 200 rigs every three days, but thus far the lack of material with which to put up the rigs has caused a delay. But new rigs are being completed daily, new locations for other rigs are being made and the lumber dealers and oil field supply houses are scouring the entire country for material.

Sixty days ago there were 20 rigs within sight of Shamrock to the east and south. Today there are over 100 within a mile of town. Development is just starting to the immediate northward, where the Carter Oil Co., the Okla Oil Co. and the Sinclair Oil Co. are the principal figures, and to the westward there is a vast area as yet untouched by the drill. At the present time, however, the Slick Oil Co., the Quaker Oil Co., Frank Brown and the Eastern Oil Co. are getting ready to start tests in that direction. In all directions, excepting to the westward, there are now many rigs on the skyline around Shamrock.

Within this district there is more undrilled proven territory than at any other point in the State, perhaps in the United States. The tests drilled thus far have opened up additional territory for development, and the work of drilling between the tests has just started. When the Hill Oil & Gas Co. drilled in the Bartlesville well on its Blair tract, two miles north of Shamrock, 40 days ago, it made possible the drilling of 150 additional wells by that company alone. When the Gypsy Oil Co. recently drilled in its deep-sand well on the Fields tract, a mile and a half south of Shamrock, it opened another wide proven area, and when the Hill and McMann companies and C. B. Shaffer brought in wells during the past week, between the Blair and the Gypsy, it made proven territory four miles long by one to two miles wide, all deep-sand drilling.

Within a short time, too, there will be several wells drilling on the townsite of Shamrock to the deep sand. When the townsite was platted the companies that held the oil and gas leases on the land reserved drilling locations so as not to be compelled to drill on town lots. There are 10 or 12 of these locations, and one rig is already up on the townsite, erected during the past week by the Slick company, on the southeast corner where Kilkenny and Blarney avenues meet.

Following the bringing in of the Gypsy, Hill, Shaffer and McMann deep-sand wells the past week, there were 75 locations made immediately, 50 of them within a mile of Shamrock. The Sinclair Oil Co. led with 30 locations, 18 on the Lesta Keys, which adjoins the townsite on the north, and 12 on the Hettie Dunson, a quarter of a mile south. One rig building contractor alone ordered 10 additional rig building crews from Tulsa and Sapulpa at one time, and all the lumbermen

in Shamrock were without rig building material for several days. The entire 5400 acres of leases, held by the Hill Oil & Gas Co., are tributary to Shamrock, and a railroad spur has been built to connect that company's yards with the town. As a result of the rapid increase in development here many additional drilling contractors are coming to this field, bringing with them dozens of drillers and tool dressers, while the number of roustabouts on the leases in this territory has been doubled three times in the past 30 days.

The officials of the Sapulpa & Oil Field Railroad, which connects Shamrock with the Frisco at Depew, report 2000 cars of freight in sight for Shamrock at the present time, many of which are now en route. The local yards are blockaded all the time, and hundreds of teams are hauling from the railroad to the field. The Hill company is receiving 400 cars of casing at the present time, the Gypsy company 200 and the C. B. Shaffer 125. The Okla announces 100 cars coming, Sinclair 100, the McMann company 150 and the Iron Mountain 100. B. B. Jones, the Carter company, the Southwest company, the Eastern, the Slick, the Prairie, the Oklahoma Natural Gas Co., the Quaker, the Savoy and the Toxaway are also in the drilling campaign in this vicinity.

The oil field payroll in the Shamrock district has become enormous, totaling now fully \$50,000 a day. All through the surrounding field there is an army of workmen, and here and there on the leases are populous camps, the headquarters of the field men. The number of the workmen is gradually on the increase.

A big portion of the land now being developed here is Indian land, and is under Federal control, the leases being granted by the Interior Department. There is one special inspector for the department, who makes Shamrock his headquarters. Altogether in the United States there are six such inspectors, but the amount of work and development under the Shamrock inspector's jurisdiction is greater than that of all the other five inspectors combined. Oil and gas wells must be drilled on Indian lands under rules and regulations laid down by the Government, and the inspector has authority to enforce them, even to canceling a lease if necessary. The State of Oklahoma is supposed to exercise similar jurisdiction over all commercial leases or land owned by white persons.

As an indication of how values of land and property have increased in the Shamrock territory, the Hill Oil & Gas Co. is reported to have refused \$6,000,000 for its holdings here, and it is said that the Ohio Oil Co. (Standard Oil) also made an offer for the Hill properties. It is said that the Hill company values its holdings at \$10,000,000. The recent deep-sand wells brought in here are estimated to have added \$10,000,000 to the value of the oil leases within a mile and a half of town, east and south, within 10 days' time.

WANT STEEL SUIT EXPEDITED.

Necessity for Removal of Impediments to
Development Appreciated in Wall Street.

New York, N. Y., March 27.—[Special.]—The decision of the Supreme Court to require the Government to press its suit against the United States Steel Corporation without further delays has met a responsive chord in Wall Street. The protracted litigation has done more to keep always to the front an element of uncertainty over what all large corporations may do than any other thing. It has held up many important plans, and it has cost the undeveloped sections of the country, and especially the South, millions in money and years of waiting.

Now that it would appear that the Supreme Court is to grant no more postponements, there would seem to be a reasonable chance for the case to reach its conclusion in time for the Steel Corporation to carry out this calendar year a part of its long-delayed plan for

improving its steel plants in the Birmingham district.

Rightly or wrongly, the financial district believes that the Government is destined to lose its suit for the dissolution of the great corporation, and it acclaims every step taken which looks to removing the admitted incubus to larger development of Southern enterprises.

Because of the present conditions in the iron and steel trade, both for domestic and export orders, any method of enlarging productive capacity means immediate heavy increase in profits. This is notably true of the situation in the Southern field. Some of the furnaces there have begun booking pig-iron orders for 1917 delivery, and the unprecedented demands on steel-making capacity have assumed all the features of a runaway market.

If the Steel Corporation could soon know definitely what the outcome of the Government's suit against it would be, the entire reconstruction program for the year possibly would be greatly increased.

Fears have been expressed that the current situation in the steel market, where eager buyers are seeking an opportunity to order in some instances a year ahead, would lead to an advance in the price of steel rails and consequent disturbance of railroad reconstruction and new construction plans. This outcome is not expected by high steel-makers.

It is stated by many rail-makers, as well as by some of the heaviest consumers of rails, that the freedom with which the railroads are booking orders for rails to be delivered in the first quarter of 1917 is a guarantee that rail prices are not to be advanced. Notwithstanding the abnormal increases in prices of all other grades of steel, the market will have to develop some very revolutionary phases before any important changes are made in the steel-rail schedule.

Continued Protection of Watersheds Is Urged.

Washington, D. C., March 27.—[Special.]—Appeals of lumber manufacturers for an appropriation to continue the purchase of forest land at the headwaters of navigable streams in the Eastern mountains has been followed by the introduction in the Senate of an amendment by Senator Gallinger of New Hampshire for the protection of the watersheds of navigable streams. The amendment will be proposed in connection with the agricultural appropriation bill when it is taken up in the Senate.

The amendment provides for an appropriation of \$1,000,000 for the fiscal year ending June 30, 1917, and \$2,000,000 for the fiscal year ending June 30, 1918, in order to carry out the purposes of the Weeks law enacted March 1, 1911, to enable any State to co-operate with any other State or States or with the National Government for the protection of the watersheds of navigable streams and to appoint a commission for conserving the navigability of such rivers. In addition, \$25,000 is appropriated to pay the necessary expenses of the National Forest Conservation Commission and its members.

The Weeks law expired by limitation June 30, 1915. It provided \$200,000 to enable the Secretary of Agriculture to co-operate with the States in the protection from fire of the forest watersheds of navigable streams and to co-operate in the organization and maintenance of a system of fire protection on any private or State forest lands within the States and situated upon the navigable rivers. It established the National Forest Reservation Commission, which has since done effective work in preventing destruction by fire.

The Secretary of Agriculture was authorized in addition to examine and recommend for purchase such land as in his judgment might be necessary for the regulation of the flow of navigable streams; to purchase in the name of the United States such lands as have been approved for purchase by the National Forest Reservation Commission and to take title to such lands.

The proposed appropriations for continuing the work done by the National Forest Reservation Commission were lost by a margin of one vote in the Agricultural Committee of the House recently, and the hope of continuing the work done under the law depends now upon the amendment offered by Senator Gallinger, which has been referred to the Committee on Agriculture and Forestry of the Senate, and which will be taken up on the floor later. The excellent results obtained under the law provides a sufficient reason for favorable action in the Senate. If the amendment is written into the agricultural bill the House conferees probably will agree to it.

Clarksburg's Marked Industrial Progress Based on Resources and Aggressive Public Spirit

MANY NEW FACTORIES SECURED, OLDER PLANTS ENLARGED AND NEW SUBDIVISION OPENED UP FOR ADDITIONAL FACTORY SITES.

[Special Correspondence Manufacturers Record.]

Clarksburg, W. Va., March 27.

Clarksburg, one of West Virginia's leading industrial cities, is keenly alive to its many advantages for diversified manufacture. Not only has this thriving city materially added to its industrial importance by securing a number of new factories in the last two years and by the enlargement of a number of its established plants, but Clarksburg is showing its faith in itself by opening up under the auspices of the Board of Trade a tract of 75 acres of factory sites, this being advantageously located along the West Fork River, well above high water and a short distance from the city, on a five-cent street-car fare, while close to this property is a large gas development which assures a plentiful supply of this fuel, which can be cheaply secured under contract.

During the years 1914 and 1915 ten new plants were located in the industrial district of Clarksburg. Among these are three glass plants, representing an investment of \$1,000,000 and employing when fully completed 1015 people, with an annual payroll of \$900,000, and one new pottery, in which approximately \$265,000 was invested and which employs 250 hands, with an annual payroll of \$200,000.

During this same period eight plants were either enlarged or rebuilt at a cost of \$521,000 and furnishing employment to 250 additional hands and increasing the city's annual payroll by approximately \$225,000.

With these new additions, Clarksburg now has 13 glass factories, employing 2400 hands, with an approximate payroll of \$2,200,000; four zinc and carbon plants, employing 1450 men, with an annual payroll of \$1,000,000; large tin plant, machine shops, foundries, woodworking plants, etc., employing all together 1500 men, with annual payroll of about \$1,500,000, giving industrial Clarksburg a total of 5500 employees in strictly manufacturing plants, with an annual payroll which is close to \$5,000,000.

It will be, perhaps, of interest to call particular attention to several of these new plants. One of the illustrations shows three of them located close together. The Pittsburgh Plate Glass Co., shown in this group, is constructing a number of splendid buildings which will cover an area of five or six acres. It now has completed and in operation one continuous tank, carrying close to 1200 tons of metal glass, which will produce between 5000 and 6000 commercial packages, or about 500,000 pounds of glass per week.

The second tankhouse is built with warehouse, flattening-house and other buildings to take care of additional product, and possibly before summer the second tank will be in operation, doubling the plant's production and the number of men employed.

The Norwood Glass Co., representing an investment of \$125,000, also shown in this group picture, is a 36-blower plant, with a capacity of 3000 commercial pounds of glass per week. This plant operates one continuous tank, employing 92 skilled men, while other employes bring the total up to 170, with a payroll of about \$4500 per week.

The third plant shown in the group is the McNicol Pottery Co., which now has in operation four bisque, five gloss and six decorating kilns, this being known as a nine-kiln plant, which, with materials, represents an investment of about \$265,000. They are now employing about 250 hands, which will later be increased when the plant is in full operation. The full capacity is expected to be attained in the early spring, representing a daily capacity of 1500 dozen cups and saucers, 1200 dozen dinner plates, 1200 dozen supper plates and all of the various pieces that go to make up full dinner sets.

This plant will represent inbound about a carload a day, with a production of about four solid carloads outbound a week, and one ferry car with about 10,000 pounds of ware to the station for distribution per day.

The plant at present has close to two acres of floor space, or about half of what the company contemplates building, for within the next two years the present factory will be duplicated and all of the company's investment transferred from East Liverpool to Clarksburg.

Another illustration shows Hazel-Atlas Glass Co.'s plant, to which a new addition is now being built, thus increasing the total production about 40 per cent. One new continuous tank is being added, together with other features for thoroughly modernizing this factory.

These splendid industrial developments have largely been brought about through the indefatigable work of the Clarksburg Board of Trade, which has among its membership the leading active, energetic business men of the community. Back of this development, of course, stands Clarksburg's greatest asset of cheap and abundant natural gas, and with it a practically unlimited supply of coal, oil, timber and glass sand.

Although this gas field is being heavily drawn upon to supply large cities in Pennsylvania and Ohio, there is and will be for years to come an abundant supply available for local consumption, and the Clarksburg Board of Trade is still in a position to offer natural gas to manufacturers at 4 cents per thousand cubic feet, or to make a contract upon a sliding scale to begin at 4 cents and not to exceed 6 cents for a term of years.

In addition to gas, the Clarksburg district has coal available in great quantities, there being approximately 350,000 acres of Pittsburgh coal averaging seven feet in thickness within 25 miles of Clarksburg, and 90 mines

are now being operated in this district, producing 7,000,000 tons annually.

Averaging the undeveloped coal areas at 10,000 tons per acre, it is conservatively figured that this district will have an abundance of coal for more than two centuries to come.

All of this means that so far as an abundance of cheap fuel is concerned, the Clarksburg district is well equipped for an indefinite period, and therefore is able to present to manufacturers opportunities where the economical power problem is fully solved.

Studying for a moment some of the special openings which this section offers at this time, it is important to have in mind the fact that Clarksburg's industrial district is close to the greatest hardwood timber supply in the East, and therefore should be an important manufacturing center for woodworking plants.

Then, too, the abundance of sand for glassware destined this section to become one of the greatest glass manufacturing centers in the country.

Clarksburg is also close to the Pittsburgh and Wheeling districts, with direct railroad connection, which enables it to draw raw materials for plants making various iron and steel products.

One of the important factors which has had largely to do with Clarksburg's steady growth has been its extensive and complete distribution facilities. It is on the East and West main line of the Baltimore & Ohio Railroad, which gives it an exceptionally favorable location for handling constantly increasing freight and passenger traffic over a wide and important territory, enabling the products of its factories to be quickly transported to the leading markets of the country.

All through passenger trains stop at Clarksburg, and the local passenger service is supplemented by the interurban electric lines of the Monongahela Valley Traction Co., which operates over a total mileage of 112 miles and serves the territory north, south, east and west of Clarksburg.

A strong evidence of this city's large and growing activities is the extensive freight and passenger business originating in this district, and the Baltimore & Ohio Railroad has shown its keen appreciation of the future possibilities of Clarksburg by having its industrial department closely co-operate with the local Board of Trade in their efforts to attract new industries and aid established ones to expand.

These large mill and manufacturing interests that have centered in and around Clarksburg have naturally made this city a community of exceptionally strong banks in proportion to its population. The following comparative statement covering a period of 20 years presents a striking example of the splendid increase in revenue and the volume of business transacted during this period:

	Deposits.	Resources.
1894	\$261,820	\$428,574
1904	2,969,225	4,448,574
1914 (January 1).....	9,127,960	11,492,219
1916 (January 1).....	9,574,252	12,575,584

The coming of new industries, as well as the expansion of established ones, has likewise brought about considerable development in other lines. During 1914 and 1915 at least 1000 new homes have been built, rep-



McNICOL POTTERY CO. PITTSBURGH PLATE GLASS CO. NORWOOD GLASS CO.
GROUP OF THREE IMPORTANT MANUFACTURING PLANTS RECENTLY ADDED TO CLARKSBURG'S INDUSTRIES.

representing an outlay of \$1,250,000; a six-story office building has been erected, costing \$100,000, while other stores and business blocks, either new or enlarged, have been provided at a cost of about \$200,000.

There has also been constructed a new high school, parochial school and two modern ward schools, while two other ward schools have been remodeled and enlarged, all these improvements costing about \$500,000.

Clarksburg has also become one of the most important distributing centers in the State, and now has nine substantial wholesale jobbing houses. Other evidences of the city's business expansion are two large hotels, representing an investment of \$750,000, and 10 smaller hotels, four modern office buildings of six, seven, nine and ten stories, four department stores and a number of modern retail stores.

It is also appropriate to refer to the advantages of Clarksburg as a city in which to live. Located in the

Beaumont Becomes Deep-Water Port

ARRIVAL OF FIRST BIG STEAMSHIP MARKS COMPLETION OF CHANNEL TO THE SEA—\$3,000,000 TO BE SPENT TO PROVIDE MODERN TERMINAL FACILITIES.

[Special Correspondence Manufacturers Record.]

Beaumont, Tex., March 22.

Beaumont formally entered the list of deep-water ports on the arrival here this afternoon of the 30,000-barrel tank steamer Vesta. The ship was in gala rig, and as it circled the harbor bands played and crowds cheered the arrival of Beaumont's first big steamship.

The Vesta is one of the fleet belonging to the Magnolia Petroleum Co., and will be used for shipping oil

acres in addition in the turning-basin. There will be 9275 feet of linear frontage, over which, when mechanically equipped with the latest appliances and intensively worked, there can be transferred annually 3,000,000 tons of miscellaneous cargoes. This linear frontage will be utilized as follows: Discharging and loading berths for 13 ships, each 500 feet in length; 1 ship, 450 feet in length; 2 ships, each 300 feet in length; 3 ships, each 150 feet in length; 3 ships, each 125 feet in length; total, 22 ships.

"Other quay wall frontage between the piers will be reserved for barges, lighters, river craft, and for smaller vessels. The seven transfer sheds on the quays and the five transshipment sheds on the piers will be of steel and will have a total holding of short-time storage of 114,500 tons. In the concrete warehouses there will be a long-storage capacity of 150,000 tons. The open storage spaces for outside freight will amount to approximately 300,000 square feet. The concrete manufacturing lofts will have a combined floor area of 620,000 square feet. There will be an administration building, the farm and fish markets and cold-storage building. Coal pockets and oil pipes are where vessels can be supplied with the least discomfort to the remainder of the terminal.

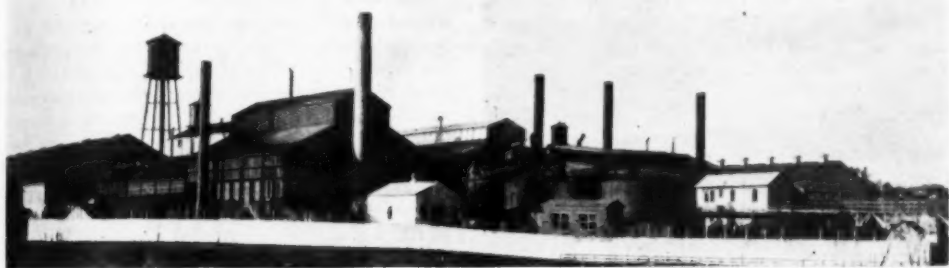
"The principal freight movements will be between the vessel and the pier, quay, shed, car or large motor truck, and also between the shed and car and the different stories of the warehouse, all of which movements will be effected by machinery. There will also be transfer bridges for lumber and structural steel and conveyors for special commodities. In the sheds will be overhead traveling transfer cranes and electric traveling hoists of a hoisting and carrying capacity of two tons each for the assorting, distributing and tiering of miscellaneous freight. The hoists will be operated in trains. For long movements motor trucks will be used. The quay walls above low water will be composed of concrete. This type of wall, with no wood entering into the construction except that which is below low-water line, and being always wet, is decay-resisting and fireproof."

\$1,500,000 to Further Develop Baltimore Water-Front Property for Industrial Purposes.

An investment of \$1,500,000 for a further development of its property is planned by the Canton Company of Baltimore. This additional expenditure will be for the purpose of reclaiming a large acreage of water-front, for building warehouses, for constructing concrete piers and undertaking other improvements to provide for all kinds of manufacturing industries. Many important and extensive enterprises have been established on the Canton property during past years, and announcements are continually appearing of new plants determined upon, the principal ones having been described in detail by the MANUFACTURERS RECORD. The Canton Company was organized in 1828, and during the past 15 years its property has been rapidly developed, with rail and water facilities of the highest character. It now owns about three square miles of land, including more than a mile of water-front.

The Cotton Movement.

In his report of March 24 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 237 days of the season was 10,411,596 bales, a decrease under the same period last year of 2,709,510 bales. The exports were 3,854,882 bales, a decrease of 2,400,007 bales. The takings were, by Northern spinners, 2,208,932 bales, a decrease of 100,934 bales; by Southern spinners, 3,122,495 bales, an increase of 711,535 bales.



MODERN PLANT HAZEL-ATLAS GLASS CO., CLARKSBURG, TO WHICH LARGE ADDITIONS HAVE BEEN RECENTLY MADE.

salubrious atmosphere of the West Virginia mountains, with an average elevation of 1100 feet, this city has an excellent climate, which, combined with its extensive pure water supply and modern sewerage system, makes it a place of unusual healthfulness.

Under the guidance of G. W. Dudderar, its secretary and treasurer, the Board of Trade, which numbers among its membership the representative business men of the city, has proven the dynamic force which has crystallized the aggressive energies and activities of this thriving city into an organization which yields a beneficial influence upon every phase of Clarksburg's industrial, commercial and civic life.

To Protect Corn From Foreign Diseases.

A public hearing on the question of extending the existing quarantine against Indian corn from Java, India, and parts of Oceania will be held on April 4, 1916, at the Department of Agriculture, Washington, D. C. A number of injurious corn diseases have been found in southeastern Asia, Australia, the Malayan Archipelago, Oceania, New Zealand, the Philippines, Japan and adjacent islands. In view of the value and importance of the American corn crop, it is considered advisable to establish quarantines against all countries from which the diseases might reach the United States.

Recent investigations have shown that maize in British India, Java, Formosa and the Philippine Islands is subject to destructive attacks of at least two and possibly three species of downy mildews. One of these is known to occur also in the Fiji Islands and Queensland, Australia; it attacks sugar-cane as well as maize.

The downy mildews found in Java, British India and the Philippines are favored by warm, moist weather, such as is considered to be ideal for corn growing in the Mississippi Valley. If any of these mildews or other Oriental diseases of corn should succeed in entering the United States and reaching the Mississippi Valley they would do immense damage.

Sapona Cotton Mills, Cedar Falls, N. C., succeeds Cedar Falls Manufacturing Co., whose plant was purchased in February by W. J. Armfield and associates, incorporators of this new company. The incorporation of the new Sapona company with \$125,000 capital stock was lately mentioned.

from the company's refinery near the city limits. The Magnolia company has spent \$250,000 in the construction of 1000 feet of concrete wharves to be used in its oil shipments.

Beaumont has under way a \$3,000,000 modern terminal. Beaumont is 50 miles from the open water of the Gulf by canal and river. The Neches River has a natural depth of 40 to 60 feet, with a width of 600 feet to half mile. In getting to the Gulf it was necessary to cut a channel through Sabine Pass and through or around Sabine Lake. Government work is being completed by which a minimum depth of 26 feet has been secured through the Port Arthur ship channel and through Sabine Pass. The Beaumont navigation district gave to the Government \$500,000 to be used in deepening and widening the Sabine-Neches canal. In connection with this work, plans were perfected for the building of modern terminals, including a turning-basin at the harbor of Beaumont.

Beaumont is a great lumber, oil and rice center, and shipments of these products will form a large part of the water-borne commerce which will go out from this port. The wharfage at Beaumont is municipally-owned, and at present consists of a comparatively new wooden wharf 785 feet in length. To this is being added a 500-foot section of concrete wharf, with adequate warehouses, storage sheds, etc., the whole to be equipped with the latest labor-saving devices, cranes, carriers, etc., for loading and unloading cargo.

This system has been planned by Hugh McL. Harding of New York, marine engineer, and is based upon the best systems in use in this country and Europe, German ports having been largely drawn upon for plans and machinery. It is estimated by the engineer that a saving of 47 cents per ton will be made on all cargoes handled over these wharves. This is a single unit in general plan adopted by the city, which will be carried out as fast as traffic demands, the whole plan comprehending wharves extending one mile along the river front, to be municipally-owned.

A technical description of the port terminals, herewith, is furnished by Mr. Harding:

"At first along the river banks of the terminal there will be constructed only the concrete quay walls. Later the projecting piers will be added, according to the increase of the tonnage. For the present and future development of the industrial terminal there will be, besides that area mentioned, about 325,000 square feet of pier space, 575,000 square feet of ship space and 60

Georgia Granite Industry Fostered by Local Enterprise

[Special Correspondence Manufacturers Record.]

Elberton, Ga., March 27.

Elberton, called the "Granite City," because it is literally surrounded by enormous deposits of a very superior grade of granite, has lately awakened to the great possibilities of the granite industry. To promote and stimulate the development of these natural resources several modern and commodious sheds for finishing the product of these quarries are now being built and equipped by popular subscription, it being the purpose of the public-spirited citizens of the city to lease or sell these sheds upon easy terms to practical men of moderate financial means.

Within a radius of a few miles of the city, and easily accessible to three lines of railway, there are a number of these quarries, affording unlimited quantities of granite of excellent quality and fineness, blue, gray and

years since at St. Louis, Mo., the proposed development is not an experiment.

With these vast deposits of granite easily accessible to two of the country's greatest trunk lines of railway, insuring adequate transportation facilities; with four banks affording ample capital; with many available



LOADING GRANITE BLOCKS FOR OREGON.

water-powers and a mild and healthful climate where laborers may work in comfort in open sheds throughout the entire year, Elberton should become a great center of the granite industry.



SHOWING METHOD OF CUTTING AT OGLESBY QUARRY.



QUARRY OF BLUE GRANITE OF OGLESBY GRANITE CO., ELBERTON, GA.

light gray, suitable for all manner of uses from building stone to the finest monumental and decorative purposes, and while the output is now being extensively marketed throughout the United States, it is desired that these quarries be operated to their capacity, thereby giving profitable employment to large numbers of skilled laborers and bringing the finished product into open competition with the best-known granites of America.

As many experts have pronounced the granite here found the equal of the celebrated New England product, and as specimens from one of these quarries was awarded the grand prize at the World's Fair held some



FACE OF SOLID VEIN OF BLUE GRANITE AT ELBERTON, GA., BELONGING TO W. M. WILCOX.

EXTENDING GOVERNMENT'S MARKET NEWS SERVICE.

Texas Bermuda Onions to Have Benefit of Methods Successfully Applied Last Year to Strawberries, Tomatoes, Cantaloupes and Peaches.

The Office of Markets and Rural Organization of the United States Department of Agriculture will inaugurate a market news service for Texas Bermuda onions during the coming season, according to official announcement just made. This is to be instituted at the request of numerous growers, bankers, shippers and local chambers of commerce in Southern Texas.

The market news service is based on three different types of reports: First, those from railroads in the producing sections; second, reports secured from large consuming markets, and third, in some cases, local reports secured in the producing sections. All the reports provide data from which daily estimates may be made regarding the probable movement and destination of cars, etc. It is hoped that the service in Texas may be made to cover all three classes of reports.

This work is based largely upon reports from the railroads. Arrangements have been made with practically all railroad lines in the United States whereby they report to the Office of Markets and Rural Organization the daily movement of the perishables with which the news service deals, giving destinations of all cars forwarded. These railroad reports enable the Office to publish figures showing the total amount of the designated commodity moving from all sections of the United States during every 24 hours of the season. In this way shippers are enabled to determine for themselves to what extent they may expect similar movements from other areas than their own, and are advised as to the amount of increases in shipments from these districts as the season advances. By means of the reports of destination shippers are enabled to determine for themselves the amount of the product which given markets are receiving daily.

Salaried employees of the Office of Markets and Rural Organization are stationed in all of the principal markets, such as Boston, New York, Philadelphia, Pittsburgh, Cincinnati, St. Louis, Chicago and Kansas City, for the purpose of procuring, receiving, tabulating and distributing market data. In the smaller markets arrangements are made, either by means of temporary employees or by means of reports from several of the large dealers, through which an accurate quotation of market conditions is secured. As the result of the Office's arrangement with the railroads, market reporters are able to secure the exact number of cars of any commodity arriving in the market in any one day, as well as the section in which the cars originate. The market reporters also make note of the general quality and condition of arrivals and secure a record of the wholesale price obtained for each commodity every day and the nature of the demand for the product. When weather conditions are such that they affect the market, that fact is reported. All information from the various markets is wired to Washington, where it is consolidated and made available to all interested parties.

The market news service was inaugurated in 1915 in a purely experimental way for the purpose of deciding upon the possibilities of such a service. Four crops were reported upon that year—cantaloupes, strawberries, peaches and tomatoes. The service was opened in Louisiana, with the Louisiana strawberry crop, and was favorably received by association managers, growers and buyers. The reports proved to be of great benefit to the local association managers, and were also of considerable value to cash buyers.

Similar activities were carried on in all the other strawberry producing sections, as well as in all of the western cantaloupe sections.

The Office of Markets and Rural Organization intends to carry on similar work in Texas during the onion season, making public the reports from the railroads dealing with previous shipments, diversions, etc.; reports from the markets, and those from the salaried employees of the Office of Markets, and any other pertinent information coming from reliable sources.

In Texas an effort will be made to cover all shipping sections, giving the same service and information to the Laredo, the Brownsville and the Nueces districts and any other section where onions may be shipped in carload lots.

\$14,500,000 Fire Loss Courageously Met

SOUTHERN CITIES DISPLAYING CHARACTERISTIC ENERGY IN REHABILITATING BURNT DISTRICTS.

During the week big fires caused extensive losses in three well-known Southern cities, press reports indicating that the total damages amounted to \$14,500,000. The municipalities referred to were Paris, Tex.; Augusta, Ga., and Nashville, Tenn., with respective losses of \$10,000,000, \$3,000,000 and \$1,500,000. With that characteristic energy which Southern cities have displayed in recent years, the people of these cities have already inaugurated systematic plans for rebuilding dwellings, stores, warehouses, factories, plants, etc., besides providing for municipal improvements tending to promote efficiency, sanitary conditions and appearance.

The Paris fire was the most destructive, laying waste over 30 blocks, much of it in the business section. The citizens of that substantial Texas city are planning to rehabilitate the burnt district along much improved lines.

Similar conditions prevail at Augusta, where the fire was in a business district, destroying stores and bank buildings, the leading daily newspaper plants, several churches and schools, the telegraph plants, etc.

The Nashville fire was confined principally to an old residential district, and more than 600 homes were destroyed, the largest fire loss the city has ever had. There is every indication that rebuilding plans will provide for better buildings than those destroyed. The municipal officials made prompt arrangements for school facilities, and a number of churches are already having plans prepared for rebuilding their edifices. The officials also contemplate acquiring sufficient land in the burnt district for improvement as an attractive park. Leading business men in Nashville have formed a committee, which will meet and discuss the question of rebuilding in such a manner as will tend to the bettering of conditions in every way.

SOUTH'S FIRST ELECTRIC STEEL FURNACE INSTALLED.

Inauguration of Important New Industry in Anniston-Talladega District of Alabama.

Birmingham, Ala., March 25—[Special].—Of special interest to the district and the entire State at large was the launching of an industry at Anniston, Ala., last week, the first run on the first electric steel furnace installed in the South. This industry is not only new to the South, but to the entire United States, there being but a very few electric furnaces in operation.

The present furnace is a nucleus for the installation of three electric furnaces in the Anniston-Talladega district. It is a six-ton Heroult furnace, with capacity of five to six heats per 24 hours, or an output of 30 to 36 tons per day. The furnace will be operated on steel scrap, and the electric power will be supplied by the Alabama Power Co., which company owns the steel plant, and it will be operated in conjunction with the Anniston Ordnance Co. Ingots will be produced by the steel company and sold to the ordnance company, which is at present operating on a large order of shells for foreign countries. It is the purpose of the steel company to eventually work into the manufacture of high-grade tool and cutlery steel. Within easy reach of the plant is located the furnace of the old Woodstock company, on which can be made basic iron of sufficient quantity to take care of the needs of the steel plant after the two additional steel furnaces shall have been installed.

This is a nucleus for the utilization of the brown ores in the Anniston district and the gray ores of the Talladega district. There is an unlimited supply of gray ore within a 30-mile haul of Anniston district, and this ore, being low in phosphorus, is particularly well adapted for use in steelmaking. The gray-ore deposits of the Anniston-Talladega district represent to that district what the red-ore deposits represent to the Birmingham district. At the present time the power line of the Alabama Power Co. is within a "stone's throw" of the Gray Ore Iron Co.'s mines near Sycamore, Ala. These valuable deposits of gray ore have not been worked for the past eight or nine years, both on account of disturbed iron market and high cost of power operation. The electrifying of the Anniston-Talladega district, the greatly improved iron market and the installation of electric steel furnace at Anniston and the need of a high-grade ore for the manufacture of steel is calculated to arouse the interest of capital in the development of the gray-ore deposits of that section.

\$250,000 Firebrick and Fireproofing Plant.

An investment of \$250,000 will be made for building a firebrick and fireproofing plant at Lonaconing, Md. This enterprise is affiliated with the Maryland Coal Co., whose officials have been investigating clay deposits on their properties and have organized the Maryland Clay Products Co. for the development. The officers of the

new company are as follows: President, J. W. Gallo-way, president of the Maryland Coal Co., New York; manager and chief engineer, Louis N. Rancke of Boston and Baltimore, he also being architect and construction engineer in charge of building the plant, to be addressed at Lonaconing; contractor, Arthur F. West of Baltimore. The plant will have a daily capacity of 60,000 bricks or 200 tons of miscellaneous products, including fireproofing materials and hollow tile. Its machinery will include electrical equipment for adapting 33,000-volt current, 100-horse-power vertical water-tube boiler, 10-ton electric motor, 3½-mile overhead trolley system and 5-mile tramway. Prices are wanted by Mr. Rancke at Lonaconing.

Notable Success of Southern Textile Exhibit.

The recent announcement by the management of the Southern Textile Exposition, held in Greenville, S. C., last November, that it has refunded to each exhibitor a pro rata share of surplus funds in the treasury after paying all bills, is another remarkable feature of the textile exhibit's great success.

When it was first suggested that such an exposition be held in the South under the auspices of the Southern Textile Association there were some who were doubtful that it would be a success, because they did not think sufficient people interested in cotton manufacturing in the South would attend. But as the plans developed demands for exhibit space increased so steadily that the three floors of the original main exhibit hall were soon taken up and it became necessary to secure additional space in four adjoining buildings. Altogether there were 180 exhibits, representing the leading manufacturers of the country of machinery, equipment and supplies used in textile mills.

The exposition was open for five days, and during that time there were 22,000 registered paid admissions. The attendance was remarkable, in that it included not only executives, but superintendents and principal foremen of cotton mills over a large section of the South.

Those who exhibited were enthusiastic in their praise of the undertaking, and a number of them regretted that their exhibits were not more extensive, and stated that when the next one was held in the South they would have larger and more complete displays of their equipment.

In fact, so successful was every feature of this first representative exhibit of textile machinery and supplies in the South that an urgent demand was made for it to become a permanent affair. The result was the organization and incorporation of the Southern Textile Exposition, Inc., to erect a permanent exhibit hall in Greenville, S. C., and to hold similar expositions every two years.

Plans have been started for the next exposition, which will be held in the fall of 1917, and for which a modern exhibit hall is to be erected to more properly house the displays.

The entire undertaking, from its inception, was characterized by efficient organization and intelligent man-

agement on the part of those handling the details, who have proven beyond question that a textile exposition, successful in its every feature, can be held in the South.

Having demonstrated this fact, the plans for the 1917 exhibit merit the hearty support in the way of comprehensive displays by those having equipment to sell Southern cotton mills, and even greater attendance on the part of Southern cotton manufacturers and their assistants, to both of whom these biennial textile expositions will prove mutually advantageous.

Big Factory for Gunstocks.

Gunstocks will be manufactured on a large scale by the Chillicothe (Mo.) Gunstock Manufacturing Co., recently organized with officers as follows: President, O. A. Myers, Gorin, Mo.; treasurer, C. A. Huston, Bearing, Mo.; vice-president, G. W. Williamson; secretary, W. J. Norris; manager, T. J. Kirkwood; each of Chillicothe. This company is building a plant which may be briefly outlined as follows: 94x42-foot two-story building; 72x56-foot two-story building; each of mill construction; gunshot feed mill with capacity of 70,000 feet on two nine-hour shifts; 38-foot band saw; 16 small band saws; four cut-off saws; 150-horse-power Corliss engine; 2 boilers, etc. The daily capacity will be two carloads of walnut gunstocks, automobile spokes and wagon spokes.

Meat Packing Plant for Bristol.

The Aronhime Packing Co., Bristol, Va., has completed arrangements for building its fresh and cured meats plant. It has awarded contract to R. A. Wilson of Bristol for constructing the building, 100x50 feet and two stories high, of fireproof construction, with mill construction roof, T. S. Brown of Bristol being the construction engineer and the Packers Architectural & Engineering Co. of Chicago being the architect. Prices on electric motors and machinery for abattoir, refrigerating, sausage manufacturing, lard and offal rendering are wanted by the packing company.

For Rebuilding in Belgium.

Charles Van Hamme, architect and decorator, 79 Frederik street, The Hague, Holland:

"Preparing on a great scale the reconstruction of monuments and buildings destroyed in Belgium, your MANUFACTURERS RECORD has been recommended to me. Could you send me a few numbers as samples, specimens, and what would be the rate of a subscription?"

To Manufacture Pumps.

While not intending to build a plant at present, the Automatic Pump Corporation will manufacture pumps. This company has been incorporated with \$50,000 capital and organized with the following officers: J. E. Parker, president and manager; B. B. Rhyne, vice-president; L. C. Parker, secretary; offices at 211 Citizens' Bank Building, Norfolk, Va. Prices are wanted on two to six horse-power oil engines, air tanks, air compressors, air reducing valves, air chambers and individual electric-lighting plants.

Doing a Great Work.

L. T. NICHOLS, General Manager Carolina & Northwestern Railway Co., Chester, S. C.

Am very glad to acknowledge receipt of copy of "National Insuredness Through Preparedness," and I note with a great deal of pleasure and interest the great work the MANUFACTURERS RECORD has been doing along this line.

Potent Factor in Clarifying Situation.

A. L. DABNEY, Dabney Engineering Co., Consulting Hydraulic Engineers, Memphis, Tenn.

I strongly endorse the position you have taken on matters of industrial preparedness and foreign relations. I do not doubt that your clear view of these matters has been a potent factor in keeping clear the minds of many of your readers.

Utilization of Wood Waste in the South

PLAN TO HAVE GOVERNMENT DEMONSTRATION PLANT ESTABLISHED IN YELLOW PINE BELT.

[Special Correspondence Manufacturers Record.]

Washington, D. C., March 27.

Recognizing the fact that there is a scarcity of the materials of which paper is made, a scarcity to which attention has been called by the Department of Commerce in a recent bulletin urging the people of the country to save rags and discarded newspapers, Senator Ransdell of Louisiana has introduced in the Senate an amendment which will be proposed to the agricultural appropriation bill. The Ransdell amendment, which will be offered as soon as the agricultural bill is taken up for consideration, is as follows:

"For investigations of methods for wood distillation and for the preservative treatment of timber, for timber testing, and the testing of such woods as may require test to ascertain if they be suitable for making paper, for investigations and tests within the United States of foreign woods of commercial importance to industries in the United States, for other investigations and experiments to promote economy in the use of forest products, and for commercial demonstrations of improved methods of processes in co-operation with individuals and companies, \$215,000."

The size of the appropriation would enable the Department of Agriculture to establish a demonstration plant in the yellow pine belt of the South. A great deal of attention lately has been given to the question of the utilization of wood waste, and in connection with Senator Ransdell's bill it is learned that Henry E. Surface, chemical engineer in forest products, and Robt. E. Cooper, chemist in forest products, lately made a report to the Department of Agriculture, indicating the results of a series of tests at the forest products laboratory, maintained in co-operation with the University of Wisconsin at Madison, in order to determine the suitability of the Southern pines for paper pulp; to ascertain the effects of various cooking conditions in the sulphate process of pulp-making, and finally, to compare the sulphate process with the soda process.

Only long-leaf pine has been used so far in the tests. The materials which so far have been tested consisted of long-leaf pine from two localities, Perry county, Mississippi, and Tangipahoa parish, Louisiana.

According to the report of the two experts made to the Forest Service of the Department of Agriculture, the total stand of long-leaf pine privately owned was estimated by the Bureau of Corporations in 1910 at 232,000,000,000 feet board measure, while for all Southern pines the amount was placed at 384,000,000,000 feet. The lumber cut from these pines in 1910 amounted to 14,000,000,000 feet. The sawed lumber represents approximately one-half the volume of the log as it comes to the mill. Bark and sawdust, which are valueless for paper-making, constitute a large proportion of the waste, but it is safe to say that 20 per cent. of the volume of the log, exclusive of the bark, is lost in slabs, edgings and trimmings. Tops and defective logs left in the woods and small logs which are at present converted into lumber with little or no profit would furnish a supply of raw material for pulp-making even greater than that derived from mill waste.

The waste wood mentioned is not, as a rule, the clean, clear material to which pulp mills have been accustomed. But when the soda and sulphate processes are employed the presence of knots, pitch pockets and streaks and remnants of decayed wood and bark are not very objectionable. The expense of handling and preparing slabs and other irregular sizes and shapes, however, is greater than for round pulpwood, so the initial cost of such material must be low enough to offset the extra cost incident to its use.

Four or five mills are at present using Southern pine mill waste for the manufacture of wrapping paper and similar products, three of which employ the sulphate process. Several other sulphate mills are either projected or in course of construction. Because of the resinous nature of the wood the preparation of paper pulp from long-leaf pine is confined to the soda and sulphate processes, unless special extraction treatments are employed preliminary to cooking.

The report says that the soda process consists in digesting suitably prepared wood with caustic soda solu-

tion. The cooking results in dissolving the lignin and resin constituents of the wood and separating the individual fibers from one another. The action depends partly upon the direct solvent and saponifying power of the caustic soda, and partly upon the hydrolysis of the wood in the presence of water at high temperatures, forming organic acid products which unite with the alkali present. Cellulose, of which the fibers are chiefly composed, withstands the cooking action, except under very severe treatment.

The sulphate process is similar to the soda process, except that sodium sulphate is employed as a cooking chemical in addition to the caustic soda. The sodium sulphide is derived from sodium sulphate, which is added during the recovery operations to make up for losses, and it is from this chemical that the process derives its name. The sodium sulphate is mixed with the black ash and subjected to a high temperature in a "smelter;" this treatment reduces it to a sodium sulphide, although the reaction is not complete. The "smelt," containing sodium carbonate, sodium sulphide and unreacted sodium sulphate, is dissolved in water and the solution is causticised, as in the soda process, with lime, which has, however, little action on the sulphide and the sulphate. During cooking the organic acids produced react with the sodium sulphide, as well as with the caustic soda, so that in calcining both chemicals are recovered as sodium carbonate.

The soda and sulphate processes can be applied to extracted or steam-distilled chips from which rosin and turpentine have been removed. Turpentine can also be obtained from resinous chips during the cooking operations by condensing the "relief" from the top of the digester. However, the turpentine is very impure, and in the case of the sulphate process contains organic sulphur compounds from which it is separated with great difficulty.

While the present experiments are not complete, they show conclusively that long-leaf pine is well adapted for the manufacture of natural color-kraft papers; that the sulphate process of pulp-making applied to this wood affords products of better quality and of higher yields than the soda process; that kraft papers can be made from long-leaf pine equal or superior in quality to the imported and domestic kraft papers now on the market, and that the high gravity of the wood and the resultant high yield of pulp per cord give long-leaf pine an advantage possessed by few, if any, other commercially important woods suitable for pulp-making.

The autoclave tests indicate that there should be a certain combination of values for the variable cooking conditions which will result in the most economical method of operation. However, other factors than the variables thus far investigated must be taken into consideration in determining what this combination is. For example, the proper degree to which a pulp must be cooked will depend partly upon the cost of the beater treatment. With cheap power for beating, the pulp need not be so severely cooked as when the cost of power is high. The best concentrations and proportions of chemicals in the digester liquors will likewise depend upon the efficiency of the recovery system and the method of operating it.

BIRMINGHAM MARKET STEADY AND STRONG.

District Chiefly Suffering From Lack of Transportation Facilities.

Birmingham, Ala., March 25.—[Special.]—The pig-iron interests of the district have continued the policy of not pushing solicitations, preferring to take care of their trade as they come in the market. To one familiar with the pig-iron business this policy at once appears a safe and conservative one; for, after all, the market fundamentally is "as strong and safe as the ratio of actual consumption." Beyond that it becomes a "gamble," and just as surely breakers are ahead. Today

steel is out of bounds; its price has far exceeded its intrinsic value. Pig-iron, at present base price, is well within its bounds as to intrinsic value. In its manufacture there is a legitimate and reasonable profit to the producer; it is at a figure where it will withstand any reasonable reaction without undue stress and strain on the part of buyers. In other words, a conservative level has been reached, and pig-iron producers realize that fact. Be it said to the credit of buyers, they also realize this fact, and are acting accordingly by not "jumping" in at the present time and showing eagerness to cover their entire wants too far ahead. It takes this concerted action on the part of conservative buyers and conservative sellers to keep the pendulum from swinging backward. Buyers seem to be anticipating their wants only to such extent as their customers in turn are demanding of them, putting aside the speculative feature. Pig-iron producers are also watching closely the matter of selling pig-iron to speculative or brokerage interests for this specific reason, as they know, by experience, this will preclude their coming in contact with their own product in a competitive way in the future. This leaves the field open for buyers to purchase iron for their needs, present and immediate future. There has been no advance in price, but the market is in a very firm condition at \$15 to \$15.50 for prompt and first half, and \$15.50 to \$16 for last half delivery. Following are f. o. b. furnace prices on pig-iron per gross ton:

N. 1 Foundry and soft.....	\$15.00	\$16.00
No. 2 Foundry and soft.....	15.00	15.50
No. 3 Foundry.....	14.50	15.00
No. 4 Foundry.....	14.25	14.75
Gray Forge.....	14.00	14.50
Basic.....	15.00	15.50
Charcoal.....	22.50	24.00

There has been no change in the cast-iron pipe situation. Producers report that a very fair volume of inquiries is being received and that resultant sales are satisfactory. As yet there has been no tendency toward a heavy buying movement, due to the fact that buyers in general consider prices out of line, or rather inconsistent with present-day developments. Following prices are quoted per net ton f. o. b. cars at the works, standard pipe: Four-inch to six-inch, \$28; six-inch and up \$25, with \$1 per ton extra for gaspipe and 16-foot lengths.

The old material market continues to show improvement, due to the fact that the low-priced pig-iron of last year is more and more becoming exhausted, and giving way to good machinery scrap in mixtures. Steel scrap of all kinds is in demand at the present, as well as No. 1 and heavy melting cast scrap. Following prices, per gross ton f. o. b. cars Birmingham, are quoted:

Old steel axles.....	\$14.50
Old steel rails.....	13.25
No. 1 steel scrap.....	11.25
No. 1 wrought scrap.....	10.00
No. 1 cast scrap.....	11.50
Heavy melting cast scrap.....	10.50
Stoveplate and light cast scrap.....	8.75
Old car wheels.....	12.50
Tram car wheels.....	10.00

The Alabama coke market continues strong, and while shipments of coke to Mexican points have been temporarily held up, the far Western users are showing up, especially the beet-sugar manufacturers on the coast. There has been no curtailment of production, and ovens in the district are being operated to their capacity. Prices remain unchanged—\$3 to \$3.50 per ton at the ovens for furnace or smelter coke and \$4 per ton at the ovens for hand-picked foundry coke.

The district is not suffering for the lack of orders for its products, but at the present time all shippers are being seriously handicapped for lack of equipment in which to move pig-iron, coal and coke. Blacksmith coal, which has always moved into the West in box cars, is now being shipped in foreign "gons" wherever available, box cars being in heavy demand for pig-iron shipments. The railroads are rendering the very best service possible under existing conditions by impartially distributing each concern its quota.

\$200,000 Brick and Tile Company.

The manufacture of bricks and tiling is the purpose of the Columbia Clay Co., Columbia, S. C., which has incorporated with a capital stock of \$200,000. Edward H. Titus, W. F. Blackburn and A. T. Blatchford were the incorporators.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

SECOND STEAMER FOR HAVANA FERRY.

Florida East Coast Railway Will Enlarge Railroad Service To and From Cuba.

The new railroad ferry steamer of the Florida East Coast Railway, which will be operated between Key West and Havana, will be ready by August 1 next. It will be a duplicate of the steamer Henry M. Flagler, which was placed in service on the same route on January 2, 1915, and which has been busy handling loaded freight cars between the United States and Cuba over 100 miles of sea. Increase of traffic has made necessary another ferryboat, and its completion will be hastened. It will be 360 feet long and 57 feet wide on the car deck, the length "between perpendiculars," as the shipbuilders say, being 348 feet, and the molded depth 22 feet. Her dead-weight capacity with a draft of 15 feet is 2500 tons, and her speed when loaded is 13 knots per hour. The steamer will accommodate 30 of the largest refrigerator cars on four standard-gauge tracks. There are also three cargo holds, which may be loaded either from the cars or through ports at the sides of the vessel, which is equipped with electric machinery for handling cargo. The dry cargo capacity is about 3000 tons. The boat is furnished with watertight compartments, ten of them for ballast with a water capacity of 3000 tons. Pumps and pipes are provided to fill or to empty them, and one of the forward ballast tanks can be used to carry molasses if desired. The Wm. Crump & Sons Ship & Engine Building Co. of Philadelphia were the builders, from plans made by M. C. Furstenau, consulting naval architect for the railway.

The establishment of the Key West-Havana railroad ferry was done in fulfillment of the plans of the late Henry M. Flagler, and it has proved fully as successful as he believed it would be. It takes a loaded steamer eight hours to make the run from dock to dock and great savings in transportation are accomplished by this ferrying of loaded cars instead of shipping freight by steamer alone, which would involve handling from cars to boat and from boat to cars at each end of the route.

RAIL AND EQUIPMENT ORDERS.

Over 800,000 Tons of Steel Contracted for This Month and More to Come.

Baltimore & Ohio Railroad has placed orders for 75,000 tons of steel rails for delivery next year at a cost of about \$2,250,000. The contracts are distributed as follows: Cambria Steel Co., Johnstown, Pa., 15,000 tons; Carnegie Steel Co., Pittsburgh, 35,000 tons; Maryland Steel Co., Sparrows Point, Md., 10,000 tons; Illinois Steel Co., Chicago, 15,000 tons. Of the latter, the Baltimore & Ohio will use 10,000 tons, while 5000 tons will be used by the Cincinnati, Hamilton & Dayton Railway, which the Baltimore & Ohio will operate.

A total of 400,000 tons of rails for delivery next year are reported placed during the past week or ten days, and the Pennsylvania Railroad is expected to add to this from 175,000 to 200,000 tons, which would make the total approximately 600,000 tons. Since March 1 it is said rail orders totaling over 800,000 tons have been awarded.

St. Louis & San Francisco Railroad's receiver has been authorized by the court to purchase 30 Santa Fe type locomotives from the Baldwin Locomotive Works, Philadelphia.

Atlantic Coast Line has ordered 10 passenger cars, 2 passenger and baggage cars, 6 baggage cars and 4 baggage and mail cars from the Pullman Company, Chicago.

Southern Railway is getting prices on equipment thus: 20 Santa Fe type and 5 Mountain type locomotives, 25 passenger cars, 10 passenger and baggage cars, 10 baggage and express cars, 10 baggage and mail cars and 5 club cars.

Illinois Central Railroad has ordered from the Pullman Company, Chicago, 45 passenger cars, 10 dining cars, 18 baggage cars, 7 chair cars and 4 buffet cars,

and from the American Car & Foundry Co., St. Louis, 9 baggage cars and 1 postal car.

Norfolk & Western Railway has ordered 6 Consolidation locomotives from Baldwin's, and the Ashland Coal & Iron Co., Ashland, Ky., has ordered 1 locomotive of the same type from the same builders.

Baltimore & Ohio Railroad has ordered 1500 tons of steel from the King Bridge Co., Cleveland, O.

Norfolk & Western Railway has ordered 2400 tons of steel from the Virginia Bridge and Iron Works, Roanoke, Va.

Tennessee, Alabama & Georgia Railway has ordered 2 locomotives from the Baldwin Works.

Missouri, Kansas & Texas Railway has ordered 15,000 tons of rails from the Illinois Steel Co., the Burlington Route 20,000 tons, the Illinois Central 35,000 tons and the Santa Fe 10,000 tons from the same mills.

Pennsylvania system is reported figuring on a prospective order for 18,000 or 20,000 cars.

Southern Pacific Railway has ordered 48,500 tons of rails for 1917 delivery from the Tennessee Coal, Iron & Railroad Co., Birmingham.

THROUGH LINE FOR PASCAGOULA.

Alabama & Mississippi Railroad Will Soon Connect With Pascagoula, Moss Point & Northern Railroad.

[Special Correspondence Manufacturers Record.]

Pascagoula, Miss., March 20.

The Alabama, & Mississippi Railroad, which lately acquired the Pascagoula, Moss Point & Northern Railroad, and is at work extending its line from Vinegar Bend, Ala., to Evanston, Miss., where it will connect with the line that runs into Moss Point and Pascagoula, is now receiving via the New Orleans, Mobile & Chicago Railroad large shipments of timber daily from Laurel and neighboring points. The timber is taken to Moss Point, where it is placed in the Escatawpa River until it can be loaded on vessels for foreign shipments. The Escatawpa is a fresh-water river, and it is from this stream that the mill of the Southern Paper Co. gets its supply of water. Timber placed in this stream will be safe from the attacks of the Teredo Navalis, or ship worm, as this most destructive foe of wooden ships and piers cannot live in fresh water.

The Alabama & Mississippi Railroad is also constructing extensive piers at Moss Point, and it is expected that the road will be completed and trains running through from Pascagoula to Vinegar Bend, Ala., within the next 30 days. An overhead crossing will be used at Evanston, where the Alabama & Mississippi crosses the New Orleans, Mobile & Chicago. As soon as the connection is made the Alabama & Mississippi will extend its line to the Pascagoula River south of the Louisville & Nashville Railroad bridge. The city of Pascagoula several years ago voted \$30,000 of 30-year bonds to pay for terminals, etc., for the Pascagoula, Moss Point & Northern Railroad, the terminals to be delivered when the road had completed its line through to its northern and southern terminals and trains running. The Alabama & Mississippi Railroad is the heir-at-law of this issue, and bonds will be issued and delivered whenever it has complied with the conditions.

Quite a number of steam and sailing vessels have of late been loading at the public wharf in Pascagoula, just below the Louisville & Nashville Railroad bridge, and the ballast, rock, sand and clay, is utilized by the city to fill in for the pier that it is constructing for the public.

Railway Development Association to Meet.

The next meeting of the Railway Development Association will be held at New Orleans on May 9, 10 and 11, headquarters being at the St. Charles Hotel. These conventions are held semi-annually, the last one having been at the McAlpin Hotel, New York, November 9, 10 and 11, 1915, and the object of the association is to promote efficiency in, as well as the importance of, industrial, agricultural, immigration and colonization work along the routes of steam railroads. The membership is composed of official representatives of railroads engaged in this kind of work, and there are at present about 150 members, representing more than 200,000

miles of railroads in this country and in Canada. The interchange of ideas at the meetings has been found particularly valuable in the work of development, but there is some talk of holding only one annual meeting, provided that the president of the association be given authority to call the members together at any other time in the year for a "round table" talk, when that may be considered advisable. The officers at present are John C. Emig, president, Cincinnati, O.; L. J. Bricker, vice-president, St. Paul, Minn.; H. O. Hartzell, secretary, Baltimore, Md., and D. E. King, treasurer, St. Louis, Mo.

Medals to Old Employees.

The Southern Railway Co. has awarded medals to 1758 men who have been with it for more than 25 years. All classes are represented, from general officers all down the line to the humblest workers. The medals were personally presented during the last two weeks by Fairfax Harrison, president of the company. They are of bronze, and bear on the face the inscription, "Southern Railway Company. For Loyalty." There is also a representation of a modern passenger train running on the line through the Georgia mountains. On the reverse are pictured a telephone dispatcher, a section gang at work and a large power press, each representing, respectively, the operating, the maintenance and the mechanical departments. Each medal has engraved upon it the name of its recipient and the dates of his service record.

It is announced by the company that there are 34 men who have been with the road more than 50 years, and there are also 235 negroes on the list of medal wearers. The longest term man is a negro, Taylor Parkman, at Birmingham, where he is employed as a hammerman. He entered the service of the road in 1858, when he was bought as a slave by the Alabama & Tennessee River Railroad, which is now in the Mobile division of the system.

Norfolk Belt Line Extension and City Terminals.

The Chamber of Commerce, Norfolk, Va., has published two pamphlets descriptive of the proposed municipal terminals for that city, and docks and warehouses in connection with the extension of the Norfolk & Portsmouth Belt Line Railroad, which the Chamber of Commerce has been endeavoring to secure. The extension, if built, as now seems probable, will be from Berkley to a point on Elizabeth River around Norfolk on the north, and would give about 22 miles of factory locations on the Belt Line to and from which the Norfolk rate will apply, according to W. A. Cox, secretary and traffic manager. The extension of the Belt Line has been discussed for a long time, and it now appears that the city and the railroad company will carry out the idea unless unexpected obstacles should prevent.

Extending Telephone Train Dispatching.

The Nashville, Chattanooga & St. Louis Railway is preparing to extend its telephone service and expects by July to have in operation a double copper wire circuit between Nashville and Hollow Rock Junction, 95 miles. The contracts for the poles and wires have been placed. With the completion of this line the company will have telephone control of trains over 271 miles of road. There will be two circuits of two wires each, one for dispatching and one for messages.

To accommodate heavier trains which it is operating with larger engines on the Chattanooga division, the company has increased the capacity of its passing track at Rockledge from 45 cars to 95 cars. Double-tracking between Tanton and Sherwood, 2½ miles, has also been completed. Additional trackage has also been put in at Sherwood. These improvements will expedite the handling of business.

From Bluefield to Pocahontas Coal Fields.

To outline plans for the construction of an electric railway from Bluefield, W. Va., to the Pocahontas coal fields the Bluefield Chamber of Commerce has appointed a strong committee which is expected to meet

within a fortnight for preliminary action. The committee is composed of R. B. Williamson, president of the Graham Grocery Co., Graham, Va., chairman; Edwin Mann, president First National Bank of Bluefield; John J. Lincoln, general manager Crozier Coal & Coke Co., Elkhorn, W. Va.; Herbert Markle, general manager Appalachian Power Co., Bluefield; L. E. Tierney, general manager Powhatan Coal & Coke Co., Powhatan, W. Va.; W. J. Jenks, general superintendent Norfolk & Western Railway, Bluefield, and Vincent L. Sexton of Graham.

Coal and Coke Tonnage on Pennsylvania Railroad.

During February the Pennsylvania Railroad lines east of Pittsburgh and Erie carried a total of 6,302,376 short tons of anthracite and bituminous coal and coke, divided thus: Anthracite coal, 971,580 tons; bituminous coal, 4,201,193 tons; coke, 1,129,603 tons. Increase, respectively, as compared with the same month of last year, 200,407 tons, 1,172,138 tons and 388,501 tons.

During the two months from January 1 to February 29, inclusive, the total tonnage of these fuels carried on the lines was 12,945,792 tons, divided thus: Anthracite coal, 2,108,458 tons; bituminous coal, 8,515,909 tons; coke, 2,321,335 tons. Increases, compared with the same period of 1915, were, respectively, thus: 451,052 tons, 1,988,008 tons and 896,100 tons.

Texas Railroad Plans an Extension.

Construction of the proposed extension of the San Antonio, Fredericksburg & Northern Railway may be started this summer. Negotiations are being pushed for the sale of \$150,000 of 6 per cent. first mortgage bonds by R. A. Love, president, who states that just as soon as they are closed the building of the link to connect the road with the Frisco and Santa Fe systems will begin. Headquarters of the road are in San Antonio, Tex., but the line at present is 24 miles long from Fredericksburg Junction, on the San Antonio & Aransas Pass Railway, to Fredericksburg.

The extension is to be about 75 miles long, and will extend through Gillespie, Mason and MacCullagh counties, and will traverse a region that is now without railroad facilities. Moreover, it would afford the two trunk lines mentioned a direct short route to and from San Antonio and other points, besides giving the city and the intervening country northern connections of great benefit. The country that will be opened up is already well developed and is of excellent agricultural possibilities. The existing line to Fredericksburg serves a section settled by sturdy Germans, all successful farmers. This road was completed more than two years ago.

New Terminals at San Antonio.

Construction of the proposed terminals of the Missouri, Kansas & Texas Railway at San Antonio, Tex., is expected to start before May 13, the time limit set by the city authorities for the beginning of work. An agreement has been reached with contractors to accept the notes of the San Antonio Belt & Terminal Railway Co., which is the name of the subsidiary corporation that will build the terminals, and it has applied to the Texas Railroad Commission for authority to issue \$1,750,000 of three-year notes to pay for the improvement. Early action upon the application is expected because the contract has yet to be formally closed. The commission will immediately send its engineer to inspect the property upon which the terminals are to be constructed. It is stated that the principal cost of the improvement lies in the real estate and in the franchises granted by the city, but the cost of the terminal construction will be \$600,000 or more.

Electric Signalling and Lighting.

Three electric substations will be erected by the Southern Railway Co. at Spartanburg and Central, S. C., and Cornelia, Ga., and it will also install electric generating equipment in the existing power-house at Greenville, S. C., to operate the automatic electric block

signals which will be installed on the main line between Spartanburg and Central and between Cornelia and Gainesville, Ga., when the double-tracking is completed. These signals, similar to those on other double-track parts of the Southern Railway, will be of the upper quadrant, three position type, and will be about two miles apart. They will indicate to the locomotive engineers whether the track is clear for a distance of two blocks, or about four miles. Between Spartanburg and Central there will be 79 signals and between Cornelia and Gainesville 33 signals. The capacity of the substations will be about 30 kilowatts each, and they will furnish a current of 4400 volts, three-phase, 60 cycles to the transmission line. The current will be used for the operation and lighting of the signals and for lighting the various stations also between the points named.

A Georgia Line to Be Sold.

The Valdosta, Moultrie & Western Railroad, 42 miles long from Valdosta to Moultrie, Ga., has been ordered sold by the Lowndes County Court there as a result of foreclosure proceedings, and D. C. Ashley, B. P. Jones and A. T. Woodward were appointed commissioners to dispose of the property. A court order was also passed authorizing them to offer the road for sale. The road is said to be in good physical condition, and is being regularly operated under the receivership. It has been expected that the line would finally become part of a trunk line running from the West to the Atlantic seacoast.

Railroad Notes.

Two new fast freight trains have just been put in service by the Southern Railway between East St. Louis and Jacksonville via Birmingham, Atlanta and Macon, in connection with the Mobile & Ohio Railroad and the Georgia Southern & Florida Railway, and it is said that they will facilitate the movement of all classes of freight between the West and the South.

\$595,000 Road Construction Contracts.

The Duval County Commissioners, Jacksonville, Fla., have awarded contracts for the road construction for which bids were recently invited. These contracts total \$595,000, and call for 66 miles of highway. They are divided as follows: Southern Clay Manufacturing Co., Chattahoochee, Tenn., at about \$300,000, for 26 miles of road, 18 miles to be of Dunn wire-cut grouted brick, 6 miles of shell and 2 miles of asphalt; F. G. Proudfoot, Chicago, Ill., \$295,000 for 32 miles of highway, including about 25 miles of asphaltic concrete and 7 miles of shell.

2000-Ton Steel Hull Steamer to Be Built at Jacksonville Yards.

The Merrill-Stevens Company, Jacksonville, Fla., has received a contract which indicates that the great demand for ships is causing buyers to go further South to place orders. This contract is for a 2000-ton steel hull steamer, and is said to call for the largest steel vessel ever constructed in a Southern shipyard with the exception of the plants at Norfolk and Newport News. Construction materials are now being assembled at the Merrill-Stevens yards, and it is expected that the vessel, designed for the American coastwise trade and to be owned by American shippers, will be completed within 12 months. Early in April the Merrill-Stevens Company will complete repairs to the Mallory Line freighter Colorado, nearly destroyed by fire off the Virginia capes during December last, establishing a record for quick work. The plant has lost but one day during three months, and its location in a climate free from hail, sleet and snowstorms is a great point in its favor.

As indicating the continued demand for new ships, Arthur L. Stevens, president of the company, has stated that during his recent visit to New York to close contract for the big steamer mentioned he could have signed enough contracts for other new ships to keep his plant busily engaged for the next 10 years. Furthermore, he stated that his company was offered by European shipowners and declined contracts for \$8,000,000 worth of new vessels.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

CUT ONLY WHAT LUMBER CAN BE SHIPPED.

Georgia-Florida Sawmill Association Urges Members to Meet Congested Conditions in Practical Way.

Savannah, Ga., March 28.—[Special.]—The regular meeting of the Georgia-Florida Sawmill Association, representing approximately 75 per cent. of the lumber manufacturing of the two States, which was held in two sessions here today in the Savannah Hotel, at which meeting about one-third of the membership was represented, was for two objects. The first was that of meeting with and hearing R. S. Kellogg of Chicago, secretary of the National Lumber Manufacturers' Association; the other was to determine what course to pursue in perpetuating the present good prices for lumber and devising ways and means of getting around the embargoes in the East and the shortage of cars with which to ship the lumber.

As a temporary expedient until better conditions obtain, the association today adopted a resolution, which shows how prosperity elsewhere in the country is affecting Southern lumber men. The resolution, which will be mailed to all members, so that they may draw their own conclusions and govern their activities accordingly, is as follows:

"After careful and thorough discussion of the lack of vessels and congested railroad conditions, both of which have greatly interfered with the movement of lumber, we believe it to be the best policy of manufacturers of yellow pine in the Southeast to regulate their production to the measure of shipping facilities. Normal production cannot be moved away from the mills, and the result is increased carrying charges, to say nothing of deterioration that will follow.

"Reports from the entire country, and particularly from the great consuming centers, are that there is a pressing need of renewed stocks, and that under existing conditions they cannot be secured in quantities, but what new stocks do reach destination are immediately consumed at higher prices. It is found that buyers are perfectly willing to pay a reasonable price. We firmly believe that transportation relief will bring about the greatest impetus in lumber buying that there has been in years, and possibly ever. Regulation of production is a question of individual necessity, and each manufacturer must be governed by his particular situation; that is to say, if he is enabled to dispose of his production there is no reason for reduced output. The demand for lumber is ample, and the market as strong as at any time within several months; it is altogether a matter of transportation."

In discussing conditions for the MANUFACTURERS RECORD, W. Frazier Jones of Jacksonville, president of the sawmill association, said: "The long-deferred prosperity of the lumber industry in Georgia, Florida, and, for that matter, the whole South, is upon us, but the lack of shipping facilities to and the embargoes in effect at the various centers in the East, where the most of our output is sold, are holding from us the full measure of prosperity that is due."

Aside from the business session, the address of Secretary Kellogg was the feature of the meeting. Mr. Kellogg outlined the work of his organization in behalf of its individual members, the subscribing associations, and described the association's country-wide propaganda for a greater use of lumber.

"There has been a revolution in the lumber business during the last 18 years," said Mr. Kellogg, "and there is no greater indication of that than the fact that the lumbermen are supporting their associations. Nine subscribing associations and the National Association have a combined fund of approximately \$400,000, which will be used exclusively for advertising and promoting the sale of lumber and lumber products. Each association has its own fund for this purpose, and is expending it on its own particular product. The Southern Cypress Association has \$100,000, the Southern Pine the same amount, the North Carolina Pine \$35,000, which shows the very progressive spirit of Southerners."

I respectfully urge your association to join your co-workers in this."

Mr. Kellogg stressed the need of a trademark, as a guarantee of quality and for advertising purposes, for the lumber of every association. In line with the suggestion, the Sawmill Association appointed a committee to devise a trademark.

He told also of the insurance features of the National Association; the work it is doing through the Interstate Commerce Commission toward securing more equitable freight rates, and of the proposed plans through the Federal Trade Commission to establish a uniform system of accounting and of selling agencies throughout the country to reduce selling costs, all under Government supervision.

Mr. Kellogg is on a general trip through the South, having visited Washington, Norfolk, where he addressed the meeting of the North Carolina Pine Association; Jacksonville, and from Savannah he will visit Atlanta and New Orleans before returning to Chicago.

He stated that, due to poor shipping facilities, less than 60 per cent. of the South's lumber production is moving, but the future is bright when this detriment is obviated.

Secretary Elwood C. Howell of the Sawmill Association stated that he had it from authoritative sources that one large Eastern railroad had recently placed an order for 6,000,000 feet of lumber, and that the New York Central had specified yellow pine for a large amount of bridge work to be done immediately, necessitating 4,000,000 feet. There is a great demand for all railroad stocks.

A letter was read to the meeting showing that prices on competing materials of lumber were advancing beyond all precedents and declaring that lumber products would inevitably replace them.

The annual meeting will be held in Jacksonville May 16 next.

BY-PRODUCT POTENTIALITIES IN PINE.

Waste That Could Be Saved and Made to Yield a Big Revenue.

Great possibilities for profitable utilization of waste resulting from lumbering operations are shown in a report to the Great Southern Lumber Co. at Bogalusa, La., by Arthur D. Little Company of Boston, based on investigation of that company's plant. From the information given regarding this particular company it is seen that millions of dollars are lost annually in this country through not turning the logging and sawmill waste into profitable by-product raw material.

The report is an abstract of the scientific data gathered after eight months of extensive general study of the amount and classification of the mill and forest waste produced by lumbering operations, and of the various methods, processes and manufactures to utilize this waste to the best advantage.

The waste material from this one industry at Bogalusa, it is stated in the report, produces raw material now available and even constituting in some cases a source of expense in its disposal which is sufficient for the concurrent manufacture of 794 tons of paper, at least 60 tons of rosin, 6000 gallons of turpentine and 12,000 gallons of grain alcohol daily while operating the present plant at capacity.

Since this report was issued in October, 1914, every by-product mentioned has advanced greatly in price. For instance, the report states that profits on a ton of paper, requiring for its manufacture only 1.5 tons of dry waste, are at least eight times as much as the average profit on 1000 feet of lumber. At this time the profit would be increased enormously, because the price of many grades of paper has advanced fully 75 per cent.

Regarding the suitability of long-leaf pine in paper-making, it is said that this wood will soon be recognized as an exceptionally valuable paper-making material, and that it is destined to form the raw material for a large percentage of the production of Kraft and book paper in the United States. In recommending the establishment of a paper mill the report contains the following:

The manufacture of paper undoubtedly provides the most profitable means of utilizing the major portion of your waste, and the limiting factor in the extension of this in-

dustry at Bogalusa is not the supply of suitable wood, but the supply of fuel. It has even been shown that when the available pulp wood and green stumps from the forest and the larger waste from the mill have been diverted to the paper mill, it will still be far more profitable to convert paving-block material and lath, box, shingle and roller stock into paper than into the several products indicated. The same is undoubtedly true of much of your low-grade lumber. The wood supply is, therefore, ample for the production of approximately 800 tons a day of paper, though the supply of fuel wood is not sufficient for such great development. Fortunately, however, the low cost of wood suitable for paper will still permit the expansion of the industry should it ever seem desirable to extend it beyond the limits set by the fuel-wood supply. With coal at \$3 a ton delivered, paper can be made at Bogalusa at a profit of over \$20 a ton.

It must be remembered that paper has enormously advanced since this report was issued in October, 1914, and so the profits would now be considerably more.

The estimated amount of dry waste wood at the mill is 3624 pounds per 1000 feet of lumber produced, and when the mill has a daily output of 1,000,000 feet of lumber the total amount will be approximately 1812 tons dry basis. Of this amount, it is said a maximum of 23 per cent. is suitable for pulp production, 2 per cent. for distillation purposes and 75 per cent. for the manufacture of alcohol and cattle feed or for power production.

In a summary of the processes of distillation it is stated in the report that a destructive distillation plant for the utilization of the pitchy sawmill waste and the loose lightwood from cut-over lands can be operated at a very good profit. At this time the improved market for naval stores would insure substantial profits from a distillation plant.

Another valuable raw material that is now being burned as waste can be converted into alcohol and cattle feed. From a cord of this wood it is estimated that 10 gallons of 95 per cent. alcohol can be produced, which is said to be equal to the quantity that can be obtained from four bushels of corn or 25 gallons of molasses. By reason of the present demand for alcohol at high prices, it is plain to see that an enormous amount of profit-producing material is allowed to go to waste at this modern plant alone, while similar waste goes on elsewhere.

The waste required in alcohol-making does not include that available for use in other by-product operations. It is stated in the report that the alcohol and food plants will utilize the wood waste which is not suitable or not required for destructive distillation or for manufacture into pulp and paper. The waste may come from either of three sources—the main dust chain, the main refuse conveyor and logging waste, although the last named may be too expensive to bring in.

Utilization of wood waste in gas producers is also recommended in the report. On this question it is said that the possibility of large scale power development by utilizing wood waste in gas producers and consuming the producer gas in internal combustion engines has been thoroughly studied in the course of the investigations. By this method it is claimed that a portion of the resinous and volatile constituents of the wood are converted into fuel gases, while through chemical reaction between the remaining combustible matter of the wood and air an inflammable gas is produced, known as producer gas, which lends itself to economical power generation in gas engines. The material available for this purpose is hogged small or round wood, sawmill and planer mill refuse or material from any process of wood distillation.

In conclusion, the present methods of waste disposal and the recommended methods for its utilization are summarized as follows:

All waste on the present cuttings, with the exception of the lightwood burned in the skidders, is left in the field to decay. All lightwood and stumpwood on old cut-over lands are left in the field. No money is spent on their disposal and they yield no financial return. All mill waste, except that used for fuel in the sawmill and the small amount sold as fuel, is burned to get rid of it. A considerable amount of what was formerly regarded as waste is now utilized in the manufacture of laths, shingles and box shooks. Based on a daily production of 1,000,000 feet, the total amount of logging waste is 2,588,000 pounds and of mill waste 3,624,000 pounds. Of the mill waste about 1,357,000 pounds are used for fuel; the remainder is burned in the destructor and the trash pit.

In its abstract of the report Arthur D. Little Inc., recommended that the Great Southern Lumber Co. take

immediate action in the utilization of waste wood by establishing the following by-product plants:

(1) A pulp and paper mill should be erected with an initial capacity of 50 tons of kraft paper per 24 hours. This mill will use for pulp wood about 253,000 pounds of dry logging waste per day, and will use for fuel about 481,000 pounds of mill waste per 24 hours.

(2) A one-unit plant for the manufacture of grain alcohol or cattle feed with a daily capacity of 1000 gallons of alcohol (or its equivalent in cattle feed). This plant would use as raw material about 130,000 pounds of sawdust per day. The residue from this plant will more than suffice for its fuel supply. On account of its high moisture content, however, this residue must be burned in admixture with an equal weight of sawmill waste.

(3) A destructive distillation plant with a capacity of 30 cords of wood per day. This plant would use as raw material all the pitchy mill waste, about 80,000 pounds per day, and a certain amount of lightwood from old cut-over lands, about 25,000 pounds per day. The plant will use for fuel about 105,000 pounds per day of sawmill waste.

(4) Research is recommended on alcohol and cattle-feed manufacture, looking toward the future expansion of the alcohol plant now recommended, and on various methods of recovery of rosin from pitchy wood, notably on the process of distillation in vacuo.

The distribution of wood to the various plants recommended is shown graphically in the following table:

	Pounds per 1000 ft. —lumber output—	Waste from old cut-over lands and logging waste.
Pulp and paper mill, 50 tons daily capacity.—Fuel and pulp wood requirements.....	481	253
Louisiana Fiber Board Co.—Pulp and board mill, 35 tons daily capacity.....	556	None
Distillation plant.—Raw material and fuel requirements.....	185	25
Alcohol plant.—Raw material and fuel requirements.....	130	None
Sawmill.—Fuel requirements.....	1,350	None
Domestic fuel.....	27	None
Paving-block material.....	215	None
Burned or left in forest.....	915	3,135
Total.....	3,624	3,628

The Great Southern Lumber Co. is one of the largest manufacturers of lumber in America, cutting about 1,000,000 feet a day and owning over 600,000 acres of timber lands.

Plant Breeders Succeed in Producing Cross-Bred Chestnut Trees Resistant to Blight Disease.

How to checkmate the new chestnut blight or bark disease that is causing such vast destruction is a problem of no small importance, says the Weekly News Letter of the United States Department of Agriculture. From its obscure beginnings in eastern New York about 12 years ago, it has swept into 19 States, and now affects about all of the northern half of our native chestnut stands, doing damage estimated at close upon \$50,000,000. It attacks the trees in twig, branch and trunk, causing death in a year or two, and soon recurs in the sprouts or suckers sent up from the still living roots. No native chestnut appears to be spared in the long run. The European chestnut is also subject to the disease, but when we come to the chestnuts of Japan and China we find very great resistance, amounting in some varieties to almost practical immunity. There appears to be now no method of controlling this disease, which is caused by a fungus whose spores are carried about by birds and insects, creating new infections wherever they reach the sapwood or inner bark of the chestnut tree. There is no apparent diminution of its virulence since it came under observation.

The most obvious means of replacing the great losses of chestnut timber and nuts would seem to lie in substituting for our native forms the Asiatic species that best resist the disease, having evidently for ages been accustomed to its presence, and also to breed the chestnut as a valuable genus of forest trees by hybridization and selection for the avowed production of varieties better adapted for our purposes.

Some chestnut breeding has already been accomplished in various parts of this country, and generally with good results. A promising experiment of this character has been under the direction of the office of forest pathology of the United States Agricultural Department for several years.

Hybrids between the highly resistant Japan chestnut and our native chinquapin have been raised in considerable numbers, quickly forming handsome dwarf trees,

bearing at an early age profuse crops of nuts of excellent quality, five or six times the size of those of the wild chinquapin parent, and ripening weeks before any other chestnuts. So far these trees show a very high degree of disease resistance. The second generation of hybrids, grown from self or chance pollinated nuts, appear quite as good as their parents, which is an important feature when the cost of propagation of nut trees by budding and grafting is considered.

Another line of breeding lies in the intercrossing of disease-resisting Japan and Chinese varieties that are rapidly being imported into this country by the office of foreign seed and plant introduction, and selection of the best resulting forms. Four generations of cross-bred Japan chestnuts of a very early bearing type, producing nuts when two or three years old, have already been grown, and the varietal characters appear to be well fixed. Some of the Chinese chestnuts are said to grow nearly 100 feet high in their home forests, and it may be possible by their use to replace in some measure our vanishing native chestnut stands, and perhaps develop very superior varieties during the process of acclimatization.

Southern Woods on British Forbidden List.

New Orleans, La., March 25.—[Special.]—Car shortages continue to affect practically the entire number of the 152 mills affiliated with the Southern Pine Association, as well as the cypress mills.

Beyond that, little of moment has marked the general domestic situation save a strengthening demand, and the fact that some mills are becoming restive under the accumulation of stocks incident to poor shipping facilities.

New Orleans exporters are disgruntled by reason of the orders of the British Royal Commission, which has forbidden British ships accepting, or other vessels delivering in British ports, shipments of furniture woods, veneers of high class and expensive woods, stone and slates. The order was effective March 4, but is just applicable here.

Southern woods affected are maple, gum, mahogany (hauled through New Orleans from Central America), cedar, bass, dogwood, hickory, walnut, tulip. Other woods for which New Orleans is a transshipment point are rosewood, cocobolo, lignum-vitae, santamaria and ebony.

The prohibition, however, affects neither cypress nor pine. Neither is oak affected. Gum, tulip, mahogany, cedar and walnut are the woods taken from the possible list of exports to the United Kingdom.

Among the lumber exports this week to England, the last of the now forbidden shipments, were 13,531 pieces of gum, 3561 bundles of gum and 40,775 pieces of oak not forbidden.

Latin-America has been drawing on the South for considerable shipments of pine, Santiago de Cuba taking 215,000 feet of pine; Ceiba, Honduras, 19,000 feet; Puerto Mexico, 65,000 feet.

A considerable coastwise movement of lumber to New York was a feature of the week.

As a measure in its campaign to standardize grades, the Southern Pine Association is pressing the distribution of its 1916 book of rules for standard grades of yard and shed stock. The book is just ready.

In line with the same movement is the proposed visit to Southern pine mills of representatives of a number of State retail associations. The committees will be guests of the mills upon the trip. Iowa, Michigan, New York, Pennsylvania, Texas, Nebraska, Illinois, Ohio, Indiana, will all be represented, according to acceptances now on hand.

The month of April will be devoted to this work. The visitors will be split into a number of delegations, under the guidance of experts and officers of the association.

Secretary-Manager Rhodes is in charge of all arrangements.

Fulton Cotton Mill Co., Athens, Ala., contemplates adding about 3000 spindles, with complementary carding machinery, twistors and winders, about January, 1917. This equipment will be installed in the company's building originally erected for looms. It will be contracted through the Lowell (Mass.) Machine Shop, the Fales & Jenks Machine Co. of Pawtucket, R. I., and the Whitin Machine Works of Whitinsville, Mass.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Record of Week's Progress in Improvements in City and Country.

Bonds Voted.

Alton, Mo.—Oregon county, Koshkonong Special Road District, voted \$10,000 bonds to improve roads.

Christiansburg, Va.—Montgomery county will issue \$100,000 bonds to construct roads.

Elkins, W. Va.—Randolph county, Leadsville District, voted \$220,000 bonds to improve 22 miles of roads.

Fort Lauderdale, Fla.—Broward county, Special Road and Bridge District No. 2, voted \$170,000 bonds for road improvements.

Georgetown, Tex.—Williamson county, Hutto Precinct, voted \$50,000 bonds to construct roads; macadamize about 16 miles.

Leesburg, Ga.—Lee county voted \$80,000 bonds to construct roads, etc.

Mt. Vernon, Mo.—Lawrence county, Aurora Special Road District, voted \$60,000 bonds to construct rock road.

Newport, Tenn.—City issued \$5000 bonds for additional street improvements.

Somerset, Ky.—Pulaski county will issue \$300,000 bonds to construct roads.

Bonds to Be Voted.

Corpus Christi, Tex.—Nueces county, Road District No. 9, votes April 22 on \$10,000 bonds to construct roads.

Edmonton, Ky.—Metcalf county voted on \$33,000 bonds to improve roads.

Kissimmee, Fla.—Osceola county, Districts 1, 2, 4 and 5, votes April 15 on \$250,000 bonds for road construction.

Quitman, Tex.—Wood county, Road District No. 2, will vote on \$240,000 bonds to construct roads.

Rustburg, Va.—Campbell county, Seneca District, will vote on \$40,000 bonds for road improvements.

Sebring, Fla.—City votes May 12 on \$50,000 bonds to improve streets.

Contracts Awarded.

Baltimore, Md.—City awarded \$28,000 contract for concrete paving.

El Paso, Tex.—El Paso county awarded \$77,368.50 contract to resurface 20 miles of road.

Fort Meade, Fla.—City awarded contract for brick paving; \$7000 available.

Little Rock, Ark.—City awarded \$65,900 contract to improve streets; 40,000 cubic yards grading; 41,000 linear feet curbs and gutters; 55,000 square yards paving.

Mayssville, Ky.—City awarded contract for 15,000 yards sheet asphalt paving; cost \$45,000.

St. Louis, Mo.—City awarded \$60,498 contract for street improvements.

Waynesville, Mo.—Pulaski county awarded \$5000 contract to construct 26 miles of road.

West Asheville, N. C.—City awarded contract for 33,000 square yards sheet asphalt paving.

Wichita Falls, Tex.—City awarded contract for 8400 square yards concrete paving; \$12,000 available.

Contracts to Be Awarded.

Asheville, N. C.—City receives bids until April 10 to construct 15,000 to 25,000 square yards concrete paving, 10,000 to 20,000 square yards brick, bitulithic, sheet asphalt, asphalt concrete or bituminous macadam and 5000 square yards concrete foundation.

Benton, La.—Bossier parish, Road District No. 2, opens bids April 11 to construct hard roads; \$50,000 available.

Blackwell, Okla.—City will pave 21 blocks with vitrified brick block; estimated cost \$110,000.

Elizabethton, Tenn.—Carter county opens bids April 1 to macadamize 70 miles of graded roads.

Isle of Wight, Va.—Isle of Wight county will construct sand-clay road; cost \$2600.

Jamestown, Ky.—Russell county will construct roads and bridges; estimated cost \$75,000; \$40,000 available.

Jacksonville, Fla.—City receives bids until April 8 to construct 20,000 to 45,000 square yards vitrified brick paving and wood curbing, etc.

Lake City, Fla.—City receives bids until April 17 for 21,000 square yards modified sheet asphalt or brick paving and 23,000 linear feet concrete curb.

Mena, Ark.—Polk county will issue bonds to build 58 miles of rock road.

Morristown, Tenn.—Hamblen county receives bids until April 1 to grade and macadamize 40 miles of public highway and streets.

Pass Christian, Miss.—City will improve streets; cost \$30,000.

Selma, Ala.—Dallas county receives bids until April 17 to improve 5½ miles of road.

Weston, W. Va.—Lewis county receives bids until April 24 to improve four roads leading out of Weston; 13,925 feet.

Correspondence Course on Road Building Established by University of Oklahoma.

A correspondence course on road building, consisting of 24 lessons, has been arranged by the extension division of the University of Oklahoma at Norman, Okla.

In undertaking this work the main purpose has been to provide a course of study that would be of special interest and assistance to those in charge of the construction, as well as the official administrators of road work in all parts of the country.

The course is distinctly not one in highway engineering, because it purposely avoids treating, except in a most superficial way, those subjects ordinarily being covered in a resident school of civil engineering.

A main feature of the work is that the text matter deals wholly with "cheap" roads, or, in other words, the economic development of typical country roads.

The course stops just short of the stone or macadam road, with all of its modern variations of bituminous-macadam, oil-macadam, bituminous-concrete, etc. recognizing that for the design and construction of roads of this class the services of a skilled engineer are necessary.

The material presented in the course briefly includes general arguments for good roads; a summarization and discussion of the principles which experience has shown to underlie skilled road administration; road economics; cost accounting; earth work and systems of road financing; convict question; general considerations applying to all kinds of road building, such as location, ruling grades and the vast importance of proper drainage. In detail are given the methods of construction and maintenance of earth, sand-clay, "topsoil" and gravel roads as developed in various States, as well as a study of the materials which have been successfully used for these types of roads.

An outline treatment is given on road structures, such as larger culverts and bridges; elementary principles are discussed, the violation of which leads to waste of public money and the observations are given of needed legislation, suggesting the legislative steps essential in any State to achieve a wise and economic expenditure of public money for highway construction.

In gathering, arranging and preparing the lessons as outlined material has been used from the best available sources in the United States, including Government publications, leading civil engineering papers, the experiences of State engineers and highway commissions and the views and teachings of leading consulting engineers in highway practice.

No claims are made for any original ideas on road building, the purpose being to gather from whatever source available the best practical information obtainable and so arrange and express this in plain, non-technical language that it will serve to create on the part of those who undertake the course a better understanding of the fundamental principles and methods of the design and construction of country roads.

The text matter and questions for the course have been prepared by James I. Tucker, professor of civil engineering of the University of Oklahoma, and also consulting State engineer of Oklahoma Department of Highways.

TEXTILES

TEXTILE INDUSTRY SOUTH IN EXCELLENT CONDITION.

Prosperity Expected to Continue for Indefinite Period—Protection Against "Dumping" Strongly Favored.

Charlotte, N. C., March 27.—[Special.]—That the textile industry of the South is in better condition today than it has been in a decade, or since 1907, is the candid judgment of leading manufacturers of the Carolinas. This improvement in condition is not confined to any one class of goods, but applies to the industry generally, although, of course, the improvement is more manifest in some lines than in others. Thus, for instance, duck and ginghams head the list, while print cloths are somewhat backward, but the explanation to account for these differences is apparent in each case. The demand for duck has been wonderfully stimulated by the war, while the shortage of dyes has affected the situation as to ginghams. Generally speaking, the cotton yarn and cotton goods situation is rapidly approaching the levels established in 1907, and while in many cases they have not yet reached that mark, they are unquestionably "on the way." This being true, it goes without the saying that Southern mill men are very optimistic and the reflex is already beginning to be manifested in the demand for Southern cotton-mill stocks.

Mr. Robert M. Miller, Jr., president and treasurer of the Elizabeth Mills of this city, manufacturing fine yarns, also former president of the American Cotton Manufacturers' Association, was asked yesterday as to the situation, and in reply he stated that it was highly satisfactory from the standpoint of the mill men. "The feature of the situation that should give the greatest satisfaction," declared he, "is to be found in the fact that the improved status affects the industry as a whole and is not confined to any one part, as has been the case at various times in the past. In other words, yarns are up, fine as well as coarse, and likewise cotton cloths of all varieties. Of course, there are fluctuations in the proportion of increase, as, for instance, print cloths have been backward for some time, but are now advancing; but the general average applies. I am stating only what is the general belief when I declare that the prices are approaching the levels of the 1907 period, which were the best of the last decade. Print cloths and a few other lines are somewhat backward, but they are coming to the front. The other lines are excellent."

Mr. Miller stated that many of the mills had sold ahead at the old prices, and that until they were able to get these contracts out of the way the new schedules would not be effective, but that orders on the new basis are being accepted right ahead at a margin which admits of a healthy profit. This is the policy followed by the majority of Southern mills, and they are just now beginning to come into the possession of the profits of the augmented prices. Heretofore they have been working on old contracts, which, while admitting of a fair margin of profit, were not to be considered with the present schedule. It is the consensus of opinion that from this time on the cotton-mill industry, barring unexpected developments of an altogether radical nature, will be in the healthiest imaginable condition.

There has been one development of the situation in the South that is giving concern, particularly in this section, and that is the growing tendency of the smaller yarn mills, of from 5000 to 15,000 spindles, to start up on night work. This is incident to the rising market and the desire on the part of the manufacturers to get through with old contracts in order that they may realize on the new and increase them while the margin of large profit holds, fearful lest the early termination of the great war abroad may send the price of the raw cotton soaring without commensurate advances in the prices of the finished articles, and they are unable to finance immense purchases of the raw material, even if they were inclined to do so.

This has disturbed the labor market, particularly in this Piedmont Carolina section, where the smaller mills are offering extra inducements to operatives to get them away from day mills to work at night. Quite a number of the mills in Gaston county—that county which has

more mills in it than any other in the South—are running at night, and others are rapidly maturing plans to do so. Conservative manufacturers throughout this section are apprehensive lest the overplus of production incident to this practice, as well as the disturbance to the labor market, will have a deleterious effect. The mills going on night work are almost exclusively yarn mills, and for the most part are small, none having more than 15,000 spindles at the outside and quite the majority ranging around 10,000 spindles.

That the industry in the South is in the best condition in many years is the judgment of the leading spinners and manufacturers, such as J. W. Cannon of the well-known Cannon Mills of Concord, Kannapolis, China Grove and Albemarle; Stuart W. Cramer of Charlotte, president of the Loryn Mills of Gastonia, and the Mayworth Mills of Mayworth, N. C.; S. B. Tanner, president and treasurer of the Henrietta Mills of Henrietta, N. C.; C. E. Hutchison of Mt. Holly, N. C., and others. Indeed, all agree as to the fact, and the only qualifications come in the degree of prosperity attained. The consensus of opinion is also to the effect that the future is big with promise, regardless of whether the war closes this coming fall and winter or not.

Southern mill men are still concerned over the vital importance of some adequate measure to provide against the dumping into this country after the war of cheap products manufactured under abnormal conditions abroad and thrown into this market after hostilities at almost any price. This measure, they maintain, should be passed and should apply not only to cotton goods, but to all products, including cheap dyes that may be poured into this country after the war to the absolute ruin of the infant dye industry just now getting under headway in America. If this is done, then the cotton yarn and cotton goods industry in the South will be in the healthiest condition, present and prospective, that it has ever known.

Campaign to Increase Cotton Mills in Texas.

The Texas State Bureau of Labor Statistics is endeavoring to arrive at the reason for the existence of so few textile mills in Texas, and has inaugurated a campaign to locate more mills within the border of the State. An effort is to be made to arouse interest both among Texans and foreign capital in the possibilities offered in Texas for such industries.

Letters have been sent to chambers of commerce throughout the State, and all the newspapers have been asked to assist in the campaign for development along these lines. It is pointed out that Texas practically grows as much cotton as Alabama, Georgia, South Carolina and North Carolina together. In Texas there was grown a total of 4,390,000 bales, 1913-1914 crop, according to the Federal report, while the bales consumed within the State totaled but 50,813, as compared to 902,671 bales for North Carolina, which raises only 970,479 bales of cotton. It is further pointed out that only 12 mills are located in Texas, with 113,052 active spindles—far below any of the other cotton-raising States. The further fact that Texas has within its borders practically every kind of fuel in coal beds, peat deposits, wood, natural gas and immense oil fields, which are big producers; plenty of labor, which is also cheaper than in many sections of the country; transportation both by rail and water to big cities and ports, are likewise given attention in the appeal of the Labor Department to stimulate interest in these branches.

The following table of comparative statistics is embodied in the letter from the Labor Department:

State.	Bales grown.	Bales consumed.	No. of mills.	Active spindles.
Texas	4,390,200	50,813	12	113,052
Alabama	1,731,751	297,229	57	1,028,036
Georgia	2,723,094	654,287	150	2,148,133
North Carolina	970,479	902,671	316	3,823,298
South Carolina	1,560,195	811,353	165	4,683,578

\$200,000 Hosiery Mill for Bristol.

A hosiery knitting plant representing an investment of \$200,000 will be established at Bristol, Va., by the Davis Hosiery Mills of Chattanooga, Tenn. This enterprise is being located largely through the efforts of the Bristol Board of Trade, which has arranged for Bristol investors to purchase \$100,000 bonds of the

Davis company as one-half of the necessary capital for the mill. The first main building will be three stories and 130 feet long by 80 feet wide, with brick walls on concrete foundation and abundant window space, contract awarded to the Stone-Huling Lumber Co. of Bristol. It will have space for machinery with a daily capacity of 2000 dozen pairs of hose, but the initial installation will be for 1000, with provision for an increase to 2000. The hosiery will be shipped to the company's Chattanooga plant for dyeing.

National Association of Cotton Manufacturers

The National Association of Cotton Manufacturers, Boston, has elected Charles H. Fish as acting secretary to fill temporarily the vacancy caused by the death of Dr. Charles J. H. Woodbury, secretary, who died at Lynn, Mass., last week. Dr. Woodbury was known for many years because of his commanding position in the world's cotton industry, and especially through his activities as secretary-treasurer of the association named and through his work as a consulting engineer since 1894.

Boston Textile Week.

Plans for the fifth annual Textile Exposition, which will be held in Boston April 24 to 29, are rapidly being completed. Every exhibit space in the big exposition building, which has an area of 125,000 square feet, has been allotted, and the displays will include textile machinery, mill accessories and power devices covering every branch of the textile industry.

During the same week the National Association of Cotton Manufacturers will hold its one hundredth meeting in Boston.

Aseptic Cotton Products Mill.

The Chattanooga (Tenn.) Aseptic Cotton Co. has plans by Clarence Jones, Chattanooga, for rebuilding its plant recently burned. Its new building will be of concrete and brick, one story high, 250x50 feet, to be equipped with machinery for manufacturing aseptic cotton products. Installation will include the electric drive.

Textile Notes.

Virgilina (Va.) Hosiery Mills may add new knitting machines.

Troy (N. C.) Knitting Mill Co. plans building additions or adding new machinery.

Randleman (N. C.) Hosiery Mills Co. plans building additions or adding new machinery.

Pacolet (S. C.) Manufacturing Co. has no plans for building a bleachery. Recent report was an error.

Sand Springs (Okla.) Army Legging Co. will erect a two-story additional factory building.

R. J. Morrison, Cherryville, N. C., may build a knitting mill. He wants data and prices on the necessary machinery.

Appalachian Training School, Boone, N. C., will erect a building and equip it for weaving carpets, rugs, towels, etc.

Jos. F. Vickery, P. O. Box 450, Atlanta, Ga., may establish absorbent cotton mill. He wants data and prices on the necessary machinery.

Pasquotank Hosiery Co., Elizabeth City, N. C., will add knitting machines in a few months; now has 92 knitters.

Southland Knitting Mills, Macon, Ga., will build 100x40-foot addition and add new machinery for furnishing; has awarded contracts.

Parker Hosiery Mill, Frostburg, Md., has final plans for its recently mentioned additional building. This new structure will be 50x23 feet, three stories high, with concrete storage basement, fire-escapes, maple floors, lighting and ventilating systems. It will be equipped with 60 new knitting machines, 35 loopers and 63 ribbers.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Monroeville.—Monroe county will construct reinforced concrete culverts and bridges and steel bridges on public roads; County Board of Revenue, L. B. Slaughter, Pres., receives bids until Apr. 24; Carl Barker, County Engr. (See Machinery Wanted—Bridge Construction.)

Ark., Eureka Springs.—Carroll County Commrs. let contract to International Steel & Iron Co., Evansville, Ind., to erect 2 steel bridges; 1 across Osage River, 150 ft., 2 spans; over Kings River, 475 ft., 3 spans; cost \$13,948. (Lately noted.)

Fla., Kissimmee.—Osceola county, Dists. 1, 2, 4 and 5, votes Apr. 15 on \$250,000 bonds to construct bridges and roads. Address County Commrs.

Fla., Titusville.—Brevard county, Second Dist. (Merritts Island Dist.) will vote about June 1 on \$40,000 bonds for building part of bridge, Cocoa to Merritts Island; S. A. Asteen, Commr. (City of Cocoa lately noted as voting \$35,000 bonds for this bridge construction.)

Ga., Gainesville.—Hall County Commrs. let contract Austin Bridge Co. of Atlanta at \$3500 to construct bridge over Chattahoochee River between Flowery Branch and Cumming.

Ky., Elizabethtown.—Hardin county will construct steel bridge with concrete floor on Dixie Highway, 1 mi. from Elizabethtown; also concrete culverts and bridge floors at other places on Dixie Highway, ranging from 2x4 opening to 30 floor slab; Fiscal Court, J. L. Irwin, Clerk, receives bids until April 2. (See Machinery Wanted—Bridge Construction.)

Ky., Jamestown.—Russell county, A. M. F. Hill, County Judge, will construct bridge in connection with road construction. (See Road and Street Work.)

Ky., Morgantown.—Dennis O'Nan Public Ditch Drainage Commrs. and Union county let contract to Vincennes Bridge Co., Vincennes, Ind., to construct 7 steel highway bridges at \$8500. (Bids lately noted.)

La., Abbeville.—Vermilion parish, Third Ward, will construct about 350 cu. yds. reinforced concrete bridges and culverts; Road Commission, D. L. McPherson, Chmn., receives bids until Apr. 12. (See Machinery Wanted—Bridge Construction.)

Md., Cumberland.—City voted \$60,000 bonds to construct bridges at Valley and Baltimore Sts. over Wills Creek. Thos. W. Koon, Mayor. (Noted in Feb.)

N. C., Raleigh.—City Commrs. and Southern Ry. (W. H. Wells, Ch. Engr. Constr., Washington, D. C.) reported as considering construction of viaduct over tracks at W. Martin St.; iron railings; creosoted wooden pavement; railway to contribute \$10,000.

Okla., Okmulgee.—City votes Apr. 4 on \$40,000 bonds to construct bridges and improve fire-department equipment. Address The Mayor.

S. C., Beaufort.—Beaufort and St. Helena Bridge Commission, T. H. Christensen, Chmn., will construct reinforced concrete bridge with draw; about 1300 ft. exclusive of approaches; cost \$80,000; Wm. Torrance, Engr., Savannah, Ga. (Lately noted.)

S. C., Greenville.—Southern Ry., W. H. Wells, Ch. Engr., Washington, D. C., let contract for steel work for new bridge across Saluda River to Virginia Bridge & Iron Co., Roanoke, Va. (Lately incorrectly noted.)

Tenn., Nashville.—City will construct Charlotte Ave. overhead bridge and approaches; separate bids until Apr. 18, as follows: Construction reinforced concrete slab overhead bridge across tracks of Nashville, Chattanooga & St. Louis R. R. in Charlotte Ave., including abutments, wing walls and incidental work (estimated quantity, 1-2-4 concrete construction, 765 cu. yds.; abutments and wing walls, 1-3-6 concrete, 1165 cu. yds.; reinforcement rods, 111,000 lbs.); paving with creosoted wood blocks roadway of said bridge (quantity, 400 sq. yds.); widening, filling, grading, bedding and macadamizing embankment and approaches to bridge (quantity, earth embankment, 18,300 cu. yds.; bedding stone, 750 cu. yds.; macadam, 715 cu. yds.); temporary shifting, shoring up and supporting street railway tracks of Nashville Ry. & Light Co. and maintenance of traffic thereon during construction and for permanent reconstruction of street railway tracks upon completion of bridge and its approaches (estimated length, double track, 900 lin. ft.); W. W. Southgate, City Engr.; Robt. Ewing, Mayor. (See Machinery Wanted—Bridge Construction.)

Tex., Bastrop.—Bastrop County Commrs. let contract Missouri Valley Bridge & Iron Co., Leavenworth, Kans., at \$25,000 to construct iron wagon bridge over Colorado River at Nash's Ferry; cantilever type; length 840 ft.; A. F. Mitchell, County Road Engr. (Call for bids lately noted.)

Tex., El Paso.—El Paso County Commrs. plan to construct reinforced concrete bridges in connection with resurfacing of Doniphan's Drive. (See Road and Street Work.)

Tex., Galveston.—Galveston county will construct temporary road bridge across Galveston Bay; bids until Apr. 10; John M. Murch, County Auditor. (See Machinery Wanted—Bridge Construction.)

CANNING AND PACKING PLANTS

Tex., Houston.—Houston Packing Co. increased capital from \$500,000 to \$800,000.

Va., Bristol.—Aronhime Packing Co. (Gordon Aronhime) will install abattoir, refrigerating and other equipment for plant for which building contract was let to R. A. Wilson, Bristol; plant for fresh and cured meats; 100x56-ft. 2-story fireproof building with mill construction roof; T. E. Brown, Constr. Engr., Bristol; Packers Architectural & Engineering Co., Archt., Chicago; lately noted. (See Machinery Wanted—Packing (Meats) Machinery.)

CLAYWORKING PLANTS

Md., Lonaconing.—Firebrick, Fireproofing, etc.—Maryland Clay Products Co. organized; Pres., J. W. Galloway, Pres. Maryland Coal Co., No. 1 Broadway, New York; Mgr. and Ch. Engr., Louis N. Rancke, Boston, Mass., and 218 E. Lexington St., Baltimore, Md.; Rancke also Archt. and Construction Engr. in charge building plant. Address machinery proposals to Louis N. Rancke at Lonaconing; Contr., Arthur F. West, 15 E. Fayette St., Baltimore; will build \$250,000 plant with daily capacity 60,000 bricks or 200 tons miscellaneous clay products, including fireproofing, hollow tile, etc.; machinery to include 100 H. P. vertical water-tube boiler, 10-ton motor (locomotive), electrical equipment for adapting 33,000-volt current, 3/4 mi. overhead trolley system, 5-mi. tramway, etc. (See Machinery Wanted—Electrical Machinery; Boiler; Tram and Trolley Systems.)

S. C., Columbia.—Brick and Tile.—Columbia Brick & Tile Co., capital \$200,000, inceptd. by Edward H. Titus, W. F. Blackburn and A. T. Blatchford.

COAL MINES AND COKE OVENS

Ky., Barbourville.—Wilson & Broger will install coal-mining plant on Hall tract.

Ky., Barbourville.—Pine Ridge Coal Mining Co. organized to develop coal mines in Bell county; leased plant of Greasy Creek Coal Co. and will improve.

Ky., Hazard.—Blue Grass Coal Corp., S. R. Jennings, Pres., Johnson City, Tenn., plans improvements at coal mines; develop 300 acres; present daily capacity 500 tons; additional capacity, new mine, 400 tons. (See Machinery Wanted—Conveyor.)

Ky., Thornton.—Southeast Coal Co., H. Laviers, Mgr., Seco, Ky., reported to develop Tilden Wright coal land tract between Millstone and Thornton.

Ky., Typo.—Harvey Coal Co., Edw. L. Douglass, Mgr., will develop 2000 acres; output not yet estimated; machinery is supplied. (Lately noted.)

Tenn., Chattanooga.—H. B. Bonney Coal Co., capital \$500, inceptd. by H. B. Bonney, A. McDonald, Lewis Duncan and others.

W. Va., Huntington.—Amherst Fuel Co. organized; Geo. M. Jones, Oak Hill, W. Va., Pres.; H. E. Jones, Oak Hill, V.-P.; F. H. Hooper, Secy.-Treas.; E. J. Payne, Mgr.; selling company for output of Amherst, Argyle, Virginia Buffalo and Sundale mines, with other properties to be acquired. (Lately noted inceptd., capital \$100,000.)

W. Va., Page.—Fire Creek Smokeless Fuel Co. (in Feb., under Huntington, W. Va., noted inceptd., capital \$150,000) organized with L. C. Taylor, Pres.; T. F. Bailey, Jr., V.-P.; J. C. B. Taylor, Secy.-Treas.; E. C. Taylor, Mgr.; will develop 1600 acres; daily capacity, 2000 tons; will install machinery, estimated cost \$30,000. (See Machinery Wanted—Mining (Coal) Machinery.)

CONCRETE AND CEMENT PLANTS

Va., Roanoke.—Cement Bricks, etc.—Hopewell Brick Corp., Petersburg, Va., capital \$25,000, chartered; Harold Shemwell, Pres.; Rankin Mason, V.-P.; Hugh K. Brownlee, Secy. and Mgr.; establish plant to manufacture cement brick and other cement products; daily capacity brick, 150,000 to 200,000; erect sheet-iron building by day work; install equipment. (See Machinery Wanted—Cement Products Machinery.)

W. Va., Point Pleasant.—Cement—C. F. Hess will rebuild cement plant reported burned.

COTTON COMPRESSES AND GINS

Ala., Attalla.—North Alabama Warehouse & Compress Co. increased capital from \$20,000 to \$50,000.

Ark., McGehee.—Merchants & Farmers' Gin Co., capital \$12,500, inceptd. by Geo. R. Ewing, I. Friedman, Wm. Wolf and others.

Miss., Magnolia.—J. H. Sandifer will rebuild gin reported burned.

Okla., Madill.—Burpo Gin Co., capital \$400, inceptd. by J. W. Burpo, H. M. Rice and Jas. K. Ross.

Okla., Ringling.—J. C. Palmer of Okla., will build gin to cost \$12,000.

S. C., Charleston.—Middleton Warehouse & Compress Co., capital stock \$100,000, inceptd. by Chas. F. Middleton, Pres.; G. Abbott Middleton, V.-P.; Chas. F. Middleton, Jr., Secy.-Treas.; cost of property \$100,000; building 206x600 ft.; plans by Simons & Mayrant, Charleston; compress contract has been placed.

Tex., Denton.—Taylor Bros. will expend \$10,000 to rebuild burned gin; install 5 ft. tooth saws and round and square-bale presses; engine and boiler not damaged in fire. (Lately noted to rebuild burned plant.)

Tex., Dodsonville.—Farmers' Gin Co., capital \$10,000, inceptd. by R. T. Harris, L. W. Campbell, Jr., and J. R. Campbell.

Tex., Gumbo.—Farmers' Gin Co., capital \$10,000, inceptd. by R. T. Harris, L. W. Campbell, Jr., and J. R. Campbell.

Tex., McKinney.—McKinney Compress Co. will rebuild plant burned at loss of \$50,000; plank wharf and ironclad construction; details not determined.

Tex., Sealy.—Sealy Oil Mill & Mfg. Co. will install 2 hinters, cost \$800.50; machinery is supplied; W. E. Schier, Mgr.; L. K. Temple, Constr. Engr. (Lately noted increasing capital stock from \$40,000 to \$50,000.)

COTTONSEED-OIL MILLS

Tex., Lockhart.—L. H. Neebe of Lockhart has contract to rebuild burned cottonseed-oil mill.

ELECTRIC PLANTS

Ala., Ashland.—Alabama Power Co., Birmingham, plans to purchase municipal lighting plant of Ashland and will supply city with electricity generated at its plant at Lock 12 on Coosa River; extend transmission line from Talladega to Ashland; city will vote on sale of plant.

Fla., Tavares.—W. F. L. Barrett, Haughton, Mich., has franchise for electric-light system, etc. (See Water-works.)

Ga., Cornelia.—Southern Ry. Co., W. H. Wells, Ch. Engr. Construction, Washington, D. C., will erect electric substation. (See S. C., Spartanburg.)

Ga., Ringgold.—D. Ferriss will improve and enlarge electric-light plant.

Ga., Tybee.—Central of Georgia Ry. C. E. Lawrence Ch. Engr., Savannah, Ga., will install electric-light and pumping plants at Tybee; has ordered equipment; machinery contract let to Georgia-Carolina Utilities Co., Savannah, Ga.

Ky., Berry.—City is considering construction of electric-light system or granting franchise. Address The Mayor.

La., Ville Platte.—City, J. M. Corell, Mayor, engaged X. A. Kramer, Magnolia, Miss., as engineer on reconstruction of pumping station and electric-light system; estimated cost \$15,000. (Noted in Feb.)

Miss., Booneville.—John K. Kaye has purchased all material for plant lately noted bought and to be remodeled; total cost of plant, \$25,000.

Mo., Cowgill.—Excelsior Springs (Mo.) Water, Gas & Electric Co. contemplates at

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tending transmission line from Polo to Cowgill and installing distribution system in Cowgill.

N. C. Marshallville.—City contemplates electric-lighting plant and other improvements. Address The Mayor.

N. C. Nashville.—City, W. L. Lincke, Mayor, asks bids until Apr. 7 on materials for late-noted electric plant construction; includes 66,000 ft. No. 8 and 2000 ft. No. 4 T. B. W. P. copper wire, poles, etc.; J. B. McCrary Co., Engr., Atlanta, Ga. (See Machinery Wanted—Water-works, Electric Light and Sewer Materials.)

N. C. Zebulon.—City, E. C. Daniel, Mayor, will construct late-noted electric-light plant; build power-house; develop 50 H. P.; will let contract; voted \$3000 bonds. (See Machinery Wanted—Steam Plant.)

Okla., Altus.—City Water and Light Dept., Chas. H. Welch, Supt., will improve electric-light system.

Okla., Blackwell.—City contemplates electric-light improvements, including installing white way in business district; Benham Engineering Co., Engr., Oklahoma City. (See Water-works.)

S. C. Central.—Southern Ry. Co., W. H. Wells, Ch. Engr. Constr., Washington, D. C., will erect electric substation. (See S. C., Spartanburg.)

Okla., Cushing.—Minnesota Electric Light & Power Co., 309 Alworth Bldg., Duluth, Minn., D. G. Lewis, Mgr., Cushing, will open bids within next 6 months on late-noted plant to develop 350 K. W.

Okla., Durant.—Wm. A. Baehr and others of Chicago purchased Durant Ice & Light Co.'s plant and will improve; organized company with Wm. A. Baehr, Pres.; D. S. MacDonald, V. P.; A. H. Brown, Treas.; W. J. O'Brien, Secy.

S. C. Greenville.—Southern Ry. Co., W. H. Wells, Ch. Engr. Constr., Washington, D. C., will install electric generating machinery in power-house. (See S. C., Spartanburg.)

S. C. Honea Path.—Public Works Com., J. A. Featherston, Supt., will expend \$2000 on late-noted installation to connect with system of Southern Power Co. of Charlotte; build about 3000 ft. transmission line; develop 150 H. P. (See Machinery Wanted—Electrical Equipment.)

S. C. Ninety-Six.—City votes Mar. 31 on \$15,000 bonds to construct electric-light plant; W. W. Gaines, Mayor.

S. C. Spartanburg.—Southern Ry. Co., W. H. Wells, Ch. Engr. Constr., Washington, D. C., will erect electric substations at Spartanburg (late-noted under "Hayne"), Central, S. C., and Cornelia, Ga., and will install electric generating machinery in present power-house at Greenville, S. C., for operation automatic electric block signals, and for lighting of stations between Spartanburg and Central, and Cornelia and Gainesville; install signals of upper quadrant, 3-position type; 33 signals to be installed between Gainesville and Cornelia; 79 from Spartanburg to Central; capacity of substations about 30 K. W. each, to supply 4400 volts, 3-phase, 60 cycles, to transmission line.

S. C. St. George.—City voted \$5000 bonds to improve electric-light plant. Address The Mayor.

Tenn., Newport.—City issued \$5000 bonds to construct electric-light system. Address The Mayor.

Tex., Big Sandy.—Big Sandy Electric Light Co. purchased site; will remove plant and make improvements.

Tex., Commerce.—Texas Power & Light Co., Dallas, will extend transmission system, now being constructed from Jenkins to Royce City, to Commerce, where it will connect with system connecting Paris and other cities.

Tex., Kenedy.—Kenedy Light & Power Co., capital \$10,000, incptd. by E. B. Fehrenkamp, Fred Fehrenkamp and M. A. Naescher.

Tex., McKinney.—Texas Power & Light Co., Dallas, plans to extend electric-light system; acquired municipal system and McKinney Ice, Light & Coal Co.'s electric-light plant.

Tex., Shiner.—City votes Apr. 18 on \$12,000 bonds to construct electric-light plant or purchase present plant. Address The Mayor.

Tex., Rio Grande.—C. Valle & Bros. are interested in plan to install electric-light plant.

Tex., San Antonio.—Meridian Road Assn., D. R. Colp, Pres., advises contemplates being ready within 30 or 60 days to let contracts for installing electric lights along Meridian Rd., about 300 mi.; Engr., Robertson Engineering Co., Lake Robertson, Pres., San Antonio, is completing preliminary work.

Tex., Skinner.—City votes Apr. 18 on \$12,000 bonds to construct electric-light plant. Address The Mayor.

Va., Virginia.—City will install electric-light plant; has begun construction of pole line. Address The Mayor.

Va., Victoria.—J. Parker Green, Propr. Victoria Ice, light and power plant, plans to install 25 K. W. or 50 K. W. 60-cycle single or 2-phase 2200-volt generator, exciter and switchboard.

W. Va., Harper's Ferry.—Harper's Ferry Light & Power Co. plans improvements.

FERTILIZER FACTORIES

Va., Richmond.—State contemplates building lime-grinding plant in Tidewater Virginia; cost \$25,000; H. C. Stuart, Governor.

FLOUR, FEED AND MEAL MILLS

Ark., Pocahontas.—J. W. Vaughan of Memphis, Tenn., representing Butler & Offutt, Hunsaville, Mo., is considering establishment of flour mill to cost \$15,000.

Ga., Jackson.—W. P. Glover, Macon, Ga., is reported to establish flour mill.

Ga., Monticello.—W. P. Glover, Macon, Ga., is reported to establish flour mill.

Miss., Magnolia.—J. H. Sandifer will rebuild grist mill reported burned.

N. C. Fayetteville.—McNeill Milling Co. will install roller flour mill; daily capacity, 50 bbls.; has let contract for equipment.

Tenn., Cleveland.—Sykes Milling Co., W. P. Sykes, Pres., and D. C. Shugart, Secy., will erect 32x48-ft. mill and 32x48-ft. warehouse; mill construction; plans by Wolf Co., Chambersburg, Pa.; will install machinery with daily capacity 200 bbls. flour and 500 bus. meal.

Tex., Glazier.—Glazier Mill & Elevator Co. increased capital from \$15,000 to \$30,000.

Va., Goshen.—Motor Plows.—Helmsa Motor Plow Co., Fort Wayne, Ind., is reported to build plant.

Va., Norfolk.—Pumps.—Automatic Pump Corp., 211 Citizens Bank Bldg., organized; J. E. Parker, Pres. and Mgr., Box 577; R. B. Rhyme, V. P.; L. C. Parker, Secy.; company lately noted chartered, capital \$50,000; advises will not build at present. (See Machinery Wanted—Air Compresses and Tanks, etc.)

Va., Richmond.—Heaters.—Virginia Heater Corp., capital \$100,000, chartered; Jas. D. Goodwin, Pres.; Grover C. Goodwin, V. P.; F. A. Carter, Secy.-Treas.

W. Va., Clarksburg.—Electrical Supplies and Machinery.—Starford Coll Co., capital \$25,000, incptd. by Edward M. Coll, Harry F. Sheets, J. W. Morgan and others.

GAS AND OIL ENTERPRISES

Ga., Brunswick.—Gasoline.—Yaryan Gasoline Co. incptd. by H. T. Yaryan of Toledo, O.; Jas. S. Bralley, H. W. Perry and Claude Suter of Brunswick to manufacture gasoline from kerosene and other by-products of Yaryan Rosin & Turpentine Co.

Ga., Brunswick.—Yaryan Flotation Co. incptd. by H. T. Yaryan of Toledo, O.; Jas. S. Bralley, H. W. Perry and Claude Suter of Brunswick; will manufacture gasoline from kerosene and other by-products of Yaryan Rosin & Turpentine Co.'s plant.

La., Lake Charles.—Mills Oil Co., capital \$15,000, incptd.; will prospect on 20-acre lease in Vinton field; E. W. Brown, Pres.; A. D. Potts, V. P. and Gen. Mgr.; R. A. Moore, Secy.; E. W. Brown, Jr., Treas.

La., Shreveport.—Caraway Oil Co., capital \$25,000, incptd.; J. W. Allen, Pres.; W. L. Dickinson and R. E. Allison, V. P.s.; Robt. R. Enery, Secy.; H. L. Stone, Treas.

Md., Baltimore.—Petroleum Products.—Wm. C. Robinson & Son Co., 32 South St., will es-

Okla., Oklahoma City.—People's Mutual Oil & Gas Co., capital \$300,000, incptd. by E. D. Davis, B. R. Burnett, J. S. Ryan and A. L. Younger.

Okla., Oklahoma City.—Partnership Oil Co., capital \$15,000, incptd. by F. L. McInnis, W. A. Joslyn and Geo. I. Eastwood.

Okla., Oklahoma City.—Partnership Oil Co., capital \$15,000, incptd. by F. L. McInnis, W. A. Joslyn and Geo. I. Eastwood.

Okla., Sapulpa.—Stinson Oil Co., capital \$25,000, incptd. by H. U. Bartlett and W. A. Stinson of Sapulpa and W. A. Jarvis of Muskogee, Okla.

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Okla., Tulsa.—Argo Oil & Gas Co., capital \$10,000, incptd. by Thos. D. Lyons, L. G. Livesay and E. F. Gester.

Okla., Tulsa.—Union Petroleum & Gasoline Co., capital \$300, incptd. by Ray S. Fellows, Albert H. Bell and Emile Offenbacher.

Okla., Tulsa.—Argo Oil & Gas Co., capital \$10,000, incptd. by Thos. D. Lyons, L. G. Livesay and E. F. Gester.

Okla., Tulsa.—Kay-Wagoner Oil & Gas Co., capital \$24,000, incptd. by W. H. Reese of Tulsa, Leo Meyer and E. D. Davis of Oklahoma City, and others.

Okla., Tulsa.—Porter Oil & Gas Co., capital \$500, incptd. by C. J. Bowman of Tulsa, A. L. Porter, A. G. and K. L. Harvey of Kansas City, Mo.

Tex., Bay City.—Bay City Hope Oil Co., capital \$3000, incptd. by H. L. Ryan, J. J. Ryan and E. C. Vickery.

Tex., Hondo.—Hondo Gas & Oil Co., capital \$25,000, incptd. by J. W. Kemp, Lee Lyman and C. C. Johnson.

Tex., Houston.—United Oil & Gas Co., capital \$20,000, incptd. by W. W. Dedman, J. M. Bowden and J. M. Wilder.

Tex., Houston.—Batson Oil & Gas Co., capital \$800, incptd. by W. E. Tucker, C. H. Conland and J. C. D. Harkrider.

Tex., Houston.—Gulf Coast Oil Corp., capital \$90,000, chartered by R. C. Duff, W. C. Turnbow and Ralph B. Feagin.

Tex., Houston.—Lumbermen's Oil Co., capital \$50,000, incptd. by C. B. Granbury, Frank L. Barnes and T. H. Monroe.

Tex., Houston.—Jack Rose Oil Co., capital \$15,000, incptd. by G. E. Smith, J. L. Smith, F. B. Huey and Joe Baehr.

Tex., Houston.—Houston-Humble Oil Co., capital \$25,000, incptd. by Wm. J. Pissonnet, F. P. Crow and Sam T. Robb.

Tex., Houston.—Ittey Petroleum Co., capital \$40,000, incptd. by H. C. Dinkins, J. S. O'Flynn and Geo. A. Hill, Jr.

Tex., Houston.—Llano Process Development Co., capital \$250, incptd. by C. Frank Ireland, Walter Morgan and R. C. Bradley.

Tex., Houston.—Texas Company, Houston, and 17 Battery Place, New York, completed all details of recently announced increase of capital from \$37,000,000 to \$44,000,000; E. C. Lufkin, Pres., New York, writes to Manufacturers Record: Authorized increase in capital amounting to \$7,000,000 for providing for rapid growth in all directions and is not for any specific improvement; as regards shipyard at Bath, Me., this yard leased by our interests and 4 ships will be built there promptly, each about 410 ft. long and having capacity about 9100 tons. (Late-noted.)

Tex., Houston.—Fair Well Oil Co., capital \$12,000, incptd. by H. B. Gould, Geo. H. Davis and C. F. Stevens.

Tex., Santa Anna.—Mountain Oil Co., capital \$25,000, incptd. by S. H. Phillips, W. M. Strozler and Leman Brown.

W. Va., Charleston.—Commercial Natural Gas Co., capital \$50,000, incptd. by A. L. Romine, May Henderson, Walter Chardy and others.

W. Va., Hollidays Cove.—Gas Products.—Gas Products Co., capital \$500, incptd. by John Mildren and Jos. Peterson of Hollidays Cove, Frank J. Collins and Edward W. Collins of Steubenville, Ohio.

HYDRO-ELECTRIC PLANTS

N. C., Northampton County.—Mount Row Plantation, Geo. M. Heath, Pres., Richmond, Va., contemplates completion of mill-power construction to develop 200 H. P. (See Land Developments.)

S. C., Spartanburg.—Interborough Power Co., capital \$100,000, incptd. by A. M. Law, R. E. Boggs, C. R. Willard and W. G. Willard; plans to develop Hill Shoals on Tyger River; generate 3000 electrical H. P. for lighting and power.

PROPOSAL ADVERTISEMENTS IN THIS ISSUE

PUBLISHED ON PAGES 80, 81, 82

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Tex., Plano.—Plano Mill & Ice Co., capital \$30,000, incptd. by R. W. Sandifer, J. D. Riddle and H. A. Bond.

Va., Buffalo Forge.—W. E. Rosser, Glasgow, Va., R. F. D., closed contract for additional machinery for late-noted mill; daily capacity will be 100 bu. cornmeal and 50 bbls. flour.

W. Va., Bluefield.—Peerless Flour & Feed Co., capital \$25,000, incptd. by B. H. Hancock, N. O. Hawkins, W. A. Thornhill and others.

FOUNDRY AND MACHINE PLANTS

Md., Baltimore.—Workshop.—Wm. F. Kehler let contract West Construction Co., Knickerbocker Bldg., Baltimore, to erect workshop at 1119 Denver St.; 2 stories; steel; 70x114 ft.

Miss., Laurel.—Stump-extracting Machines.—Free Stump Extracting Co. organized by W. P. Ratliff, Chas. Green, E. E. Ferrill and Benj. F. Schneider.

Mo., St. Louis.—Electrical Machinery.—Wagner Electric Mfg. Co. began erection 2 additional buildings; building No. 1, 90x140 ft., structural-steel frame, with open bay spanned by traveling crane of 50 ft., equipped for punch-press operations; building No. 2, 90x160 ft., of reinforced concrete, equipped to manufacture small parts, including punch-press work; new structure to be connected by tunnel with main section of plant No. 1; Cudron Co. of Chicago prepared plans. (Noted in February to have increased capital from \$1,800,000 to \$2,000,000 and to have let contract to erect addition.)

Tex., San Antonio.—Gas Generators.—Alamo Gas Generator Co., capital \$3000, incptd. by G. H. Marshall, W. M. Hanson and W. E. Little.

Va., Goshen.—Iron Ties.—Nelson-Myers Iron Tie Co., Fort Wayne, Ind., is reported to build plant.

establish plant at Hampden Ave. and 26th St. to manufacture and store compounds for petroleum products; install not more than 20 tanks above or under ground; construction under supervision of J. J. Byrne, Building Inspector.

N. C., Burlington.—Gas Plant.—John Bogart and Chas. Pohl, Engrs., New York, are reported as interested in promoting erection of gas plant.

N. C., Wilson.—Gas Plant.—City, E. F. Kille, Mayor, asks bids until Apr. 6 (postponed date) to construct late-noted gas plant; brick and concrete building; equipment for high-pressure distribution, including about 12 mi. wrought-pipe street mains; Engrs., Anderson & Christie, Charlotte, N. C. (See Machinery Wanted—Water-works Improvements and Gas Plants.)

Oklahoma.—Purcell Oil & Gas Co., capital \$100,000, incptd. by Albert Hildebrandt (of Chas. H. Hildebrandt & Son, 19 W. Saratoga St.) and R. B. Hamilton, both of Baltimore, Md.; Brown Carter of Washington, D. C.; Dr. J. Purcell of Purcellville, Va., and others; owns and has under lease about 2400 acres, which will be developed.

Okla., Ardmore.—Steiner-Sykes Oil Co., capital \$50,000, incptd. by R. L. Steiner, C. E. Sykes and Ernest Hendon.

Okla., Muskogee.—Cunningham Oil & Gas Co., capital \$150,000, incptd. by T. J. Whitfield and Ed K. Brook of Muskogee and B. U. Cunningham of Drumright, Okla.

Okla., Nowata.—Kello Oil & Gas Co., capital \$25,000, incptd. by C. A. Starr, J. T. McCollum and M. F. Wilkinson.

Okla., Oklahoma City.—People's Mutual Oil & Gas Co., capital \$300,000, incptd. by E. D. Davis, B. R. Burnett, J. S. Bryan and A. L. Younger.

Okla., Oklahoma City.—Wolf Pen Oil Co., capital \$200, incptd. by Cila E. Doty, Roy A. Wheeler and J. S. Douglass.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tenn., Dandridge.—W. A. Lyle will expend about \$7000 on lately-noted hydro-electric construction; build dam costing \$1000, powerhouse costing \$1500 and 2-mi. transmission line costing \$1200; develop 33 H. P.; no bids; W. J. Savage, Contr., Knoxville, Tenn. (See Machinery Wanted—Wire (Copper).)

ICE AND COLD-STORAGE PLANTS

Fla., Tavares.—W. F. L. Barrett, Houghton, Mich., has franchise for ice and cold-storage plants, etc. (See Water-works.)

Ky., Bowling Green.—Kentucky Public Service Co., H. D. Fitch, Mgr., will install 30-ton ice-making machine and cold-storage plant; machinery contract let.

La., Lake Charles.—Calcasieu Ice & Mfg. Co., J. A. Bel, Prest., let contract to Oliver & Sons to erect 35x155-ft. brick building; will install machinery with daily capacity 50 tons ice. (Lately noted inceptd., capital \$25,000.)

Md., Emmitsburg.—Rosensteel & Hopp will build ice plant; daily capacity 5 tons; purchased machinery.

Miss., Booneville.—John K. Kaye purchased equipment for lately-noted ice plant; will erect 40x60-ft. ordinary-construction building.

N. C., Wilmington.—Swift & Co. (main office, Chicago) let contract A. D. O'Brien to erect cold-storage and office building; 2 stories; 58x109 ft.; brick; shell-rock trimming; cost \$25,000; install additional equipment; B. H. Stephens of Wilmington is Supervising Archt.

S. C., Florence.—Florence Ice Co. will erect cold-storage plant; brick; 3 stories; capacity, 20 to 25 carloads of meat or other produce.

Tex., McKinney.—Polar Ice & Fuel Co., capital \$40,000, organized with Thos. E. Craig, Prest.; S. O. Scott, V.-P.; W. Avery Dowell, Secy.-Treas.; will build ice plant.

Tex., Plano.—Plano Mill & Ice Co., capital \$20,000, inceptd. by R. W. Sandifer, J. D. Riddle and H. A. Bond.

IRON AND STEEL PLANTS

Ky., Middlesboro.—Iron Furnace.—Virginia Iron, Coal & Coke Co., Henry K. McHarg, Jr., V.-P. and Gen. Mgr., Roanoke, Va., has blown in Middlesboro iron furnace. (Noted in Dec.)

Tenn., Chattanooga.—Steel Furnaces, Electric Furnace, etc.—Chattanooga Steel Co., \$2,000,000 capitalization, organized; Prest., C. E. James, Chattanooga; 1st V.-P., J. W. Baird, Prest. National Roll & Foundry Co., Avonmore, Pa.; 2d V.-P., W. T. James, Chattanooga; Secy., Herbert Bushnell, Chattanooga; completed all arrangements for building plant; to include two 75-ton open-hearth furnaces; 35-in. blooming mill with 10-hour capacity 800 tons; billet mill; bar mill; sheet mill; entire plant driven by electric motors; electricity from Chattanooga Tennessee River Power Co. hydro-electric plant at Hales Bar; awarded contract to National Rolling Mills Co. to equip rolling mill; to Westinghouse Electric & Mfg. Co. to furnish electrical machinery; construction under supervision W. R. Miller Co.; these three companies of Pittsburgh, Pa. (Heretofore noted to be organized, build steel furnaces and electric furnaces, etc.)

LAND DEVELOPMENTS

Ark., West Memphis.—Wm. L. Johnson, Odd Fellows' Bldg., Memphis, Tenn., and Geo. T. Kendal, Grand Rapids, Mich., will develop 1250 acres for industrial and residential suburb; grading land, laying pavements, constructing roads, etc.; arranged for several industrial enterprises, hotel, dwellings, etc.

Fla., Carrabelle.—Silver Lake Co., capital \$6000, inceptd.; N. S. Townsend, Prest.; J. D. Bower, Secy.-Treas.; both of Carrabelle; R. F. Mitchell, V.-P., Pensacola.

Fla., Seabreeze.—J. E. Thompson, New York, is reported to improve tract at Holly Hill with frontage of 500 ft. on Halifax River; improvements to include fills, seawall and beautifying of grounds.

Ga., Macon.—Wellston Fruit Co., capital \$20,000, inceptd. by Waring E. Hardell of Macon, Harry E. Moyer of Riverton, N. J., and others.

Md., Baltimore.—Canton Company, Water and Commerce Sts., will issue \$1,500,000 bonds for further developments, to include reclaiming large acreage waterfront land, building warehouses, constructing concrete piers, etc.; not ready to announce details.

N. C., Northampton County.—Mount Row Plantation, 712 American National Bank Bldg., Richmond, Va., inceptd.; capital \$300,000; Geo. M. Heath, Prest.; R. E. Heath, V.-P.; G. R. Heath, Secy.; plantation acre-

age 3400; 2100 acres under cultivation; contemplates completion of dyking of 4 mi. river frontage, now about 80 per cent. completed; also contemplates completion of mill power to 200 H. P. development.

Va., Chester.—Chester Development Corp., capital \$50,000, chartered; F. D. Fuller, Prest.; A. C. Buchanan, Secy.-Treas.

Va., Norfolk.—La Siesta Land Corp., capital \$15,000, chartered; H. L. Page, Prest.; R. W. Sturgis, Secy.

W. Va., Romney.—Berkeley Orchard Co., capital \$35,000, inceptd. by W. B. Cornwell, W. W. McClain, Ira V. Cowgill and others.

Va., Richmond.—Mount Row Plantation, 712 American National Bank Bldg., lately noted inceptd., develops North Carolina land. (See N. C., Northampton County.)

W. Va., Wellsburg.—Chestnut Heights Improvement Co., capital \$10,000, inceptd. by Geo. Patterson, John R. Elson, H. G. Emig and others.

W. Va., Wheeling.—Beech Bottom Land Co., capital \$200,000, inceptd. by A. C. Whitaker, N. P. Whittaker, E. E. Wing and others.

LUMBER MANUFACTURING

Ala., Blount County.—John T. Hagin purchased surface and timber rights on 5000 acres in Blount county; will cut timber on 3000 acres and utilize remainder for farming.

Ala., Dothan.—Chipleys Lumber Co., capital \$3000, inceptd. by G. W. Pilcher, L. C. Pilcher and T. T. Pilcher.

Ark., Fayetteville.—Abbott Lumber Co., capital \$30,000, inceptd. by Harvey McCracken, F. M. Platter and Wm. Abbott.

Ala., Florala.—Florala Sawmill Co. will rebuild drykiln and lumber sheds reported burned at total loss, including lumber, of \$25,000 to \$30,000.

Ark., McNeill.—B. I. Graves, Buena Vista, Ark., will establish sawmill.

Ala., Northport.—Holman-Hughes Lumber Co. will rebuild plant on original plans. (Under Ala., Tuscaloosa, lately noted burned.)

Fla., Tarpon Springs.—Lyon Lumber Co., capital \$500,000, organized with C. H. Lutz, Prest. and Gen. Mgr., Tarpon Springs; T. A. Vincent, V.-P., Inverness, Fla.; J. B. Lyon, Secy.-Treas., Clearwater, Fla.; will build plant at Gulf Pine; sawmill with daily capacity 60,000 to 70,000 ft. lumber; planing mill with daily capacity 40,000 ft.; drykilns; commissary; has ordered machinery; plant cost \$100,000.

Ga., Macon.—Williams Mfg. Co., capital \$100,000, inceptd. by F. W. Williams, P. H. Williams and X. Y. McCann.

Ga., Savannah.—Port Wentworth Lumber Co., capitalization \$1,000,000, organized to unite interest of Great Eastern Lumber Co., Southern Seaboard Lumber Corp., certain properties of Hilton-Dodge Lumber Co., other timber land and mills, etc.; inceptd. by I. H. Fetty (Prest.), Kansas City, Mo.; Jas. Imbrie of Wm. Morris Imbrie & Co., 61 Broadway, New York; Gen. S. Lewis, Holyoke, Mass.; R. R. Moffat, New York, and H. G. Levick, Boston. (Noted in January.)

Ky., Mayking.—J. H. Spencer and others purchased timber boundary on Pine Creek; reported to install mills.

Ky., Mayking.—Geo. E. Horner purchased timber tract on Pine Creek for development.

Md., Darlington.—Holston River Lumber Co., lately noted inceptd., capital \$300,000, will operate near Abingdon, Va. (See Va., Abingdon.)

Miss., Magnolia.—J. H. Sandifer will rebuild sawmill reported burned.

Miss., Monarch.—Newman McKinstry and Mr. Lancaster, Hattiesburg, Miss., are reported to install sawmill with daily capacity 25,000 ft. lumber; purchased equipment.

N. C., Biltmore.—Biltmore Sawmill, capital \$25,000, inceptd. by Benj. Starbuck, H. G. Etheridge and J. E. Rector.

N. C., Kinston.—Rutledge & Co., O. M. Rutledge, Mgr., will rebuild plant noted damaged by fire; erect sawmill of 25,000 ft. capacity; construction by company force.

N. C., Rutherfordton.—Hines Lumber Co., lately noted inceptd., will operate in Meriwether S. C. (See S. C., Meriwether.)

Okla., Maud.—Maud Lumber Co., capital \$10,000, inceptd. by E. F. Akin, J. R. Harding and W. W. Ballard.

S. C., Meriwether.—Hines Lumber Co., Rutherfordton, N. C., capital \$50,000, inceptd.; R. L. Hampton, Prest.; C. F. Cline, V.-P.; C. J. Young, Secy.; W. J. Hines, Gilkey, N. C., Treas. and Mgr.; will erect planer shed and office of ordinary wood construction; install equipment for daily capacity 50,000 ft. North Carolina pine rovers. (See Machinery Wanted—Belting, etc.)

S. C., Spartanburg.—Bydemont & Co., capital \$3000, inceptd. by J. F. Robertson and J. R. Robertson, Jr.

Va., Abingdon.—Holston River Lumber Co., Darlington, Md., capital \$300,000, inceptd.; Edward M. Allen, Prest.; S. S. Spencer, Secy.; J. A. G. Allen, Mgr.; install double band mill with daily capacity 100,000 ft. lumber; open bids Apr. 1 to erect ordinary-construction building; address building proposals to H. T. Ballah, Hotel Belmont, Abingdon; will receive machinery bids. (See Machinery Wanted—Sawmill (Band).)

Va., Cornwall.—South River Lumber Co., capital \$100,000, inceptd. by R. F. Whitmer, Prest., Philadelphia, Pa.; Harry Steele, Secy., Northumberland, Pa.

METAL-WORKING PLANTS

Md., Glesboro Point.—Tungsten Metal.—Chemical Products Co., Alex. G. McKenna, Prest., 621 Alabama Ave. S. E., Washington, D. C., will build plant; 200x250 ft.; frame and concrete; will manufacture tungsten metal used in manufacturing high-grade steel.

Va., Roanoke.—Steel Tire Armor.—Miller Tire Armor Co. (present address, Stone Cliff, W. Va.) inceptd.; capital \$50,000; W. L. Miller, Prest. and Mgr.; R. S. Miller, Northfork, W. Va., V.-P.; V. L. Miller, Orchard, W. Va., Secy.-Treas.; contemplates renting building; install lathes, sheet steel rolls, punches, dies, shears and various forming tools, shapers, drills, electric welders (crude rubber and vulcanizers), etc.; address machinery bids (opened about June 1) to W. L. Miller, Prest., Stone Cliff, W. Va.; daily capacity plant, 50 sets steel auto tire armor. (See Machinery Wanted—Engines (Gasoline), etc.)

MINING

Ala., Jemison.—Gold.—Jemison Mining Co., capital \$10,000, inceptd. to develop gold mines; C. P. Ludwig, Prest. and Gen. Mgr., Birmingham; Geo. M. Collum, Secy.-Treas., Jemison.

Ala., Jemison.—Iron.—Jemison Mining Co., capital \$10,000, inceptd. by C. P. Ludwig, Geo. M. Collum, Alex. Brazil and M. P. Franklin.

Ala., Keener.—Iron.—J. J. Moore, Box 344, Gadsden, Ala., will operate 157 acres; daily capacity 40 tons. (Lately noted as planning development of iron mines.)

Ark., Harrison.—Zinc.—C. L. Byrne and W. B. Johnson of Ardmore, Okla., plan development of 160 acres zinc property.

Ark., Fort Smith.—Smelting.—Fort Smith Smelter Co., capital \$357,000, organized by H. F. Buck of Joplin, Mo., and others; will build smelter costing \$250,000 at South Fort Smith. (Mr. Buck of Joplin, representing Northern Steel Co. of Warren, Oo., was lately noted as considering erection of smelting plant.)

D. C., Washington.—Sand and Gravel.—Smoot Sand & Gravel Corp., foot of 3d St. S. E., succeeds company; L. E. Smoot, Prest. of new company; J. A. Saltzman, Secy.; A. F. Harlan, Treas. (See Machinery Wanted—Roller, Engine, etc.)

Ga., Atlanta.—Kaolin.—Houston Kaolin Co., capital \$10,000, inceptd. by T. Poole Maynard and W. F. Simmons, Hurt Bldg.

Ga., East Point.—Potash.—Agricultural Chemicals Co., 1623 Hurt Bldg., Atlanta, Ga., investigating Georgia sericite containing potash; view to development; build test plant.

Ky., Paducah.—Clay.—Paducah Clay Co. increased capital from \$12,000 to \$100,000; operates clay mine in Marshall county near Briensburg.

N. C., High Point.—Stone.—High Point Stone Co. inceptd.; capital \$50,000; J. C. Bouldin, Prest.; D. R. Roper, Secy.; J. H. Weant, Mgr.; products, building granite and crushed stone. (See Machinery Wanted—Crushing (Rock) Equipment.)

Okla., Miami.—Rogers-Hastings Mining Co., capital \$10,000, inceptd. by O. F. Mason of Miami; J. B. Hastings of Bernice, Okla.; Philip Donohoo of Afton, Okla., and T. J. Rogers of Grove, Okla.

Okla., Nowata.—Cheney Mining Co., capital \$10,000, inceptd. by H. G. Cheney, H. W. Reed and J. E. Banks.

Okla., Tulsa.—Zinc Retort.—J. E. Hildt, Cons. Engr., and others will build zinc retort plant; location not decided; now placing contracts for material, machinery and supplies; will now establish zinc refinery; brass mill special, etc., contemplated for later manufacture.

Va., Ripplemeade.—Limestone.—Virginian Limestone Corp., capital \$400,000, chartered; Chas. A. Klotz, Prest.; Edward W. Agnew, Secy.; both of Chicago, Ill.

MISCELLANEOUS CONSTRUCTION

Fla., Daytona.—Canal.—Halifax River Yacht Club plans to widen, extend and deepen canal from clubhouse to main channel and otherwise improve river bed and club group; expend \$4500.

Fla., Jacksonville.—City will construct marginal wharf, similar to those already constructed, along north side of Pier No. 1, from end of present wharf, 30 ft. wide and 699 ft. long; also marginal wharf, similar to those already constructed, 50 ft. wide, from north side of west end of Pier No. 1 along shore bulkhead for 500 ft.; Port Commrs., Realty Bldg., receive bids until Apr. 8; J. C. O'Dell, Gen. Mgr., 405 Realty Bldg. (See Machinery Wanted—Wharf Construction.)

Ga., Atlanta.—Subway.—City, Fulton county (W. Tom Wilson, County Engr.) and Southern Ry. (W. H. Wells, Ch. Engr. Construction, Washington, D. C.) will construct underpass at S. Pryor St.; 700 ft. long, including approaches; 54 ft. wide; depth of 14 ft. under tracks; underpass proper to be 100 ft. long, remainder of distance being for approaches; city appropriated \$20,000, county \$15,000 to \$30,000 and railway \$35,000. (Noted in Feb.)

Ga., Savannah.—Retaining Wall.—City will construct concrete retaining wall and extend sewer at foot of West Broad St.; bids received at office Clerk of Council until Apr. 1; E. R. Conant, Purchasing Officer. (See Machinery Wanted—Retaining Wall, etc.)

La., Boyce.—Levee.—City is reported as contemplating voting on bonds to construct levee system. Address The Mayor.

La., Alexandria.—Mattress Protection.—Red River, Atchafalaya and Bayou Boeuf Levee Board let contract Douglas & Burt to place revetment or mattress protection work on river front from mouth of Bayou Rapides to foot of Beauregard St.; protection work to consist of mattress of logs and poles held in place by rock.

La., Alexandria.—Canal.—Red River, Atchafalaya and Bayou Boeuf Levee Board authorized State Engrs., New Orleans, to invite bids on enlarging Section 3 of State Canal between Alexandria and Bayou des Glaises, 18 mi.; cost about \$75,000; survey now being made.

Miss., Bay St. Louis.—Seawall.—Seawall Comms. let contract Harrison & Co., Mobile, Ala., to construct 15,000-ft. seawall in front of Bay St. Louis; cost about \$135,000.

N. C., Charlotte.—Lake.—Mockenbug Country Club is considering construction of lake.

N. C., Northampton County.—Dyke.—Mount Row Plantation, Geo. M. Heath, Prest., Richmond, Va., contemplates completion of 4 mi. dykes, now about 90 per cent. completed. (See Land Developments.)

Va., Norfolk.—Freight Piers.—Norfolk & Western Ry., J. E. Crawford, Ch. Engr., Roanoke, Va., let contract J. P. Pettyjohn & Co., Lynchburg, Va., to construct pier sheds proper as part of 2 merchandise piers; to Virginia Bridge & Iron Co., Roanoke, Va., for all steel construction, and to Wilson Mfg. Co., Norfolk, Va., to furnish steel rolling doors; practically all shed construction of metal, except roof, which will be gravel and slag; automatic sprinklers and fire curtains for fire protection; equipment for loading and unloading steamers to include deck elevators in form of endless chains from ends of piers into ship rooms.

Jas. Stewart & Co., 30 Church St., New York, recently noted as having contract for substructure, let subcontracts as follows: 11,000 creosoted piles, Norfolk Creosoting Co. and Atlantic Creosoting Co. and Wood Preserving Works, Norfolk; 600 untreated piles, American Pile & Lumber Co., Norfolk; 4,000,000 ft. lumber, Elizabeth River Lumber Co., Norfolk; creosoting lumber, Norfolk Creosoting Co. and Atlantic Creosoting Co. and Wood Preserving Works, Norfolk; bolts and sundry iron. Pittsburgh Screw & Bolt Co., Pittsburgh; cast-iron work, J. K. Larkin & Co., Brooklyn; reinforcing steel, Concrete Steel Co., New York; cement, Giant Portland Cement Co., New York; sand and gravel, Virginia Sand & Gravel Corp., Norfolk; dredging, Atlas Dredging Co., New York; roofing, sash and doors, John P. Pettyjohn & Co., Lynchburg.

Norfolk Creosoting Co. writes to Manufacturers Record: Order covering 6000 creosoted piles 45 to 80 ft. long and 2,500,000 ft. creosoted lumber, delivered within next 4 mos. (Lately noted as consisting of about 9000 ft. bulkhead (completion July 1), southbound and northbound piers 1200 220 ft. and 800x220 ft. (completion Oct. 1), and 1,500,000 yds. dredging (completion Dec. 1), bids for sheds and other superstructures to be asked as other work advances; plans include 12,000 creosoted piles

and about 4,000,000 ft. lumber; creosoted pile and timber construction; steel sheds; flat built-up roofing; wood floors; slips between structures; 4 tracks on each pier; total cost \$1,800,000.

MISCELLANEOUS ENTERPRISES

Ala., Gadsden—Construction.—W. T. Christopher Construction Co. increased capital from \$300 to \$12,000.

Ala., Mobile—Construction.—Jett-Muths Construction Co., capital \$2000, inceptd.; D. E. Jett, Pres.; G. A. Muths, Secy.-Treas.; G. M. Jett, V.-P. and Gen. Mgr.

Ala., Montgomery—Contracting.—Chapman-Cross Construction & Realty Co., capital \$5000, inceptd.; R. A. Chapman, Pres. and Gen. Mgr.; S. M. Cross, Secy.-Treas.

Ala., Tuscaloosa—Laundry.—Edgar Hayes will install laundry; electrical equipment.

Fla., Brooksville—Printing.—M. L. Dawson will remodel building to be occupied by Brooksville Star for printing plant and office.

Fla., Carrabelle—Navigation.—New River Navigation Co., capital \$2000, inceptd.; N. S. Townsend, Pres.; J. D. Bower, Secy.-Treas.; both of Carrabelle; R. F. Mitchell, V.-P., Pensacola.

Ky., Berry—Bottling.—Wakula Hotel Co. will install plant to bottle mineral water; has arranged for pumps and fittings.

Miss., Durant—Printing.—Durant Printing Co. inceptd. by J. B. McKinstry, R. A. Povall and others.

Miss., Gulfport—Transportation.—Gulf Transportation Co., capital \$50,000, inceptd. by J. A. Leathers, C. L. Causey, W. H. Tipple and others.

Mo., St. Louis—Contracting.—Crescent Masonry & Contracting Co., capital \$2000, inceptd. by Wm. C. Kely, Anna Edwards, Alfred Edwards and Robt. C. Kelly.

Mo., St. Louis—Construction.—County Construction Co., capital \$300, inceptd. by Frank T. Adler, Harry H. Haussier and Dora Adler.

N. C., Kings Mountain—Hardware.—Kings Mountain Hardware Co., capital \$25,000, inceptd. by J. A. Ellis and Lee Herndon of Kings Mountain and W. F. Mastin of Charlotte, N. C.

Okla., Tulsa—Laundry.—Right Way Laundry Co. has plans for laundry building at 22 S. Cincinnati Ave.; glass and steel; 2 stories and reinforced for 5 stories; install new machinery in working and wash rooms.

Tenn., Jackson—Laundry.—Queen Sanitary Laundry Co., capital \$25,000, inceptd. by H. T. Bailey, O. J. Nance, G. C. Wilkerson and others.

Tenn., Nashville—Contracting.—Gould-Rawn-Wilson Co., capital \$50,000, inceptd. by E. V. Rawn, H. M. Gould, C. B. Wilson and others.

Tex., Beaumont—Transportation.—Gulf Export & Transportation Co. increased capital from \$100,000 to \$200,000.

Tex., Galveston—Iron and Steel.—Phoenix Iron & Steel Co., capital \$100,000, inceptd. by Leonard Joseph, D. A. Singer and Walter Buchler.

Tex., Glazier—Grain Elevator.—Glazier Mill & Elevator Co. increased capital from \$15,000 to \$30,000.

Tex., Waco—Dairy.—R. M. Dairy Co. organized; E. W. Marshall, Pres.; Anderson Riley, V.-P.; J. H. Riley, Secy.; J. G. Hobbs, Mgr.; has plant; lately noted inceptd.; capital \$33,000. (See Machinery Wanted—Dairy Machinery.)

Tex., Jasper—Grain.—Jasper Grain Co., capital \$3000, inceptd. by J. E. Joseph, R. C. Miller and L. W. Currie.

Va., Rippled—Rock Crusher.—Virginian Ry. H. Fernstrom, Ch. Engr., Norfolk, Va., will build rock-crushing plant; reported cost \$100,000.

Va., Hopewell—Laundry.—Manhattan Laundry Co., capital \$50,000, organized by Maurice E. Lynn and H. D. Phillips to establish steam laundry and cleaning plant; will erect building.

Va., Petersburg—Printing.—The Progress let contract E. L. Bass to erect building; 5x100 ft.; R. A. Munden, Archt.

Va., Richmond—Construction.—Chesapeake Realty & Construction Co., capital \$25,000, inceptd.; Geo. Hinds, Pres.; P. Conella, V.-P.; Frances Rose, Secy.

Va., Wytheville—Hardware.—Bluegrass Hardware Co., capital \$25,000, inceptd.; J. P. Churchman, Pres.; J. A. Cottrell, Secy.-Treas.

W. Va., Clarksburg—Printing.—Exponent Co., capital \$50,000, inceptd. by W. Brent Maxwell, Hugh Jarvis, W. Guy Tetrick and others.

MISCELLANEOUS FACTORIES

Ala., Mobile—Whiting.—Mobile Whiting Co., H. J. Warsap, Mgr., will establish plans to soon increase daily capacity of 30 tons.

Ala., Scale—Peanut Products, etc.—Scale Peanut Products Co., H. T. Benton, Pres., First National Bank Bldg., will erect peanut oil mill, mixed feed plant and syrup mill to cost \$20,000; mixed feed plant to have daily capacity of 20 tons and equipment will include conveyor system, driers, etc.; let contract for machinery.

Ark., Stuttgart—Creamery.—Grand Prairie Creamery & Ice-Cream Co. organized; installed machinery for daily capacity 300 gals. ice-cream and 1000 lbs. butter.

D. C., Washington—Bakery.—Holmes & Son, 107-115 F St. N. W., will erect addition to bakery; 75x140 ft.; 4 stories and basement; fireproof; plans by C. D. Cooley Co., Pittsburgh, Pa.

D. C., Washington—Chemical Products.—Chemical Products Co. let contract John H. Nolan Construction Co., 606-607 Munsey Bldg., Washington, to erect factory; 1 story; frame; cost \$24,000.

Fla., Carrabelle—Naval Stores.—Townsend Bower Co., capital \$6000, inceptd.; N. S. Townsend, Pres.; J. D. Bower, Secy.-Treas.; both of Carrabelle; R. F. Mitchell, V.-P., Pensacola.

Fla., Jacksonville—Medicine.—White's Yucatan Herb Co., capital \$15,000, inceptd.; W. R. Thompson, Pres.; G. W. White, V.-P.; M. O. Thompson, Secy.-Treas.

Fla., Jacksonville—Films.—Eagle Film Co. will enlarge plant at Arlington Heights; erect dark studio, 70x140 ft., costing \$30,000; complete electric plant; furniture storehouse and carpenter shop; has ordered engines and other equipment.

Fla., Jacksonville—Liquid Carbonic Gas.—Liquid Carbonic Co. of Chicago, A. E. McLean, Atlanta, Ga., Mgr.; will establish plant; cost, including equipment, \$50,000.

Fla., Miami—Pulp and Fiber.—International Pulp & Fiber Co. organized by C. L. Stewart of Murraysville, Pa., to manufacture cellulose and spinning fiber from waste vegetable matter; will establish plant at Miami; contemplates establishing plants at Tampa, Norfolk, Mobile, New Orleans and Galveston.

Fla., Orlando—Shock Absorbers.—United States Shock Absorber Co., capital \$100,000, inceptd.; Francis V. Phillips, Pres.; Geo. W. Phillips, V.-P.; A. B. Johnson, Secy.; J. H. Tucker, Treas.; will manufacture shock absorbers for automobiles, etc.

Ga., Atlanta—Clothing.—H. A. Lochrodge & Co., Lynchburg, Va., leased second floor of building at 88-90 S. Pryor St. and will equip to manufacture clothing.

Ky., Hopkinsville—Bottling.—Coca-Cola Bottling Co. organized; Luther F. Carson, Pres. and Mgr.; John T. Carson, V.-P.; Thos. E. Overshiner, Secy.; has installed equipment for bottling soft drinks; daily capacity 4 doz. cases. (Lately noted inceptd.; capital \$5,000.)

Ky., Louisville—Medicine.—Kampfmuehler Rheumatic Remedy Co. increased capital from \$500 to \$10,000.

La., Crowley—Rice.—T. Simon & Co. will install rice mill; cost of equipment, including sprinkler system, \$50,000 to \$60,000.

Miss., Columbus—Car Seals.—Southern Car Seal Co., L. F. Richardson, Pres., 1912 2d Ave. S., will establish plant to manufacture patented car seals; company not fully organized; location not decided; may establish plant in Cincinnati; estimated daily capacity 50,000. (Lately noted.)

Miss., Jackson—Cigars.—Jackson Cigar Co., capital \$3000, inceptd. by J. J. Coman, R. O. Hoffman, W. P. Bridges and others.

Miss., Magnolia—Rice.—J. H. Sandifer will rebuild rice mill reported burned.

Miss., Pass Christian—Molasses and Sugar.—Heaslip Molasses & Sugar Co., capital \$100,000, inceptd.; S. F. Heaslip, Pres.; G. E. Hollander, V.-P.; Paul H. Maloney, Secy.-Treas.

Mo., Carthage—Overalls, etc.—Sedalia Pants Co., Sedalia, Mo., is reported to establish overall and trouser factory.

Mo., Kansas City—Automobile Device.—Noel Four-Wheel Drive Mfg. Co., capital \$50,000, inceptd. by Edwin Daly, Frank Glatz and Eusetta Noel.

Mo., St. Louis—Chemicals.—Platfrie Chemical Co., capital \$25,000, inceptd. by Wesley A.

Chamberlain, Thos. W. Williams, Ferd Heck wolf, Jr., and others.

N. C., Wilson—Peanuts.—North Carolina Peanut Co., capital \$120,000, inceptd. by Alfred H. Hinde, Benj. H. Tyson, Wiley R. Wood and others.

N. C., Raleigh—Ice Cream.—White Ice Cream Co., 108 S. Wilmington St., lately noted inceptd., capital \$50,000, continues (former partnership) ice cream manufacture; plant equipped.

Okla., Avant—Glass.—Scandinavian Glass Mfg. Co., capital \$20,000, inceptd. by A. W. Anderson, R. N. Neal, R. T. Frickholm and O. A. Nystrand.

S. C., Greenville—Cigars.—Sidenberg & Co., M. A. Levy, Supt., plans to enlarge and improve present plant or erect factory; present daily output, 65,000 cigars; proposes to increase to 100,000 or 125,000.

S. C., Spartanburg—Bottling.—Spartanburg Coca-Cola Bottling Co. let contract J. W. Allen to erect plant; granite and concrete; 30x60 ft.; 2 stories; concrete floor; tile wainscoting; enameled metal ceiling; daily capacity 2500 bottles; cost \$10,000. (Lately noted.)

Tenn., Bristol—Cleanser.—Reynolds Corp. plans enlargement and improvement of plant manufacturing household cleansing compound.

Tenn., Copperhill—Chemicals.—Carcolite Chemical Co. (controlled by Tennessee Copper Co., 2 Rector St., New York) will rebuild plant reported burned at loss exceeding \$250,000.

Tenn., Kingston—Lime.—Southern States Lime Co., capital \$50,000, inceptd. by C. G. Myers, J. N. Derrick and Heater Waller.

Tenn., Memphis—Hair Tonic.—Graves Hair Tonic Co. increased capital from \$10,000 to \$100,000.

Tenn., Memphis—Waterproofing.—National Waterproofing Co., E. W. Parks, Pres., 917 Tennessee Trust Bldg., will erect 2 buildings; 4x30 and 6x30 ft.; cost \$7000; will install motors, sewing machines, boiler, fans, etc.; cost \$10,000; will manufacture "Rain-coat." (See Machinery Wanted—Boiler; Cotton Cloth.)

Tex., Fort Worth—Bottling.—Texas Beverage Syrup Co., capital \$1,000, inceptd. by J. R. Slaughter, W. P. Love, J. H. Harris and Littleton Brewster.

Tex., Orange—Confectionery.—Sanitary Confectionery Co. organized; S. M. White, Pres.; E. W. Montgomery, V.-P. and Mgr.; J. C. Tracy, Secy.; W. A. Campbell, Treas. (Lately noted inceptd., capital \$3000.)

Tex., Tyler—Cooking Compound.—Tyler Ice Co. contemplates erection of cooking compound plant; 88x112 ft. 2-story building; manufacture cooking compound from cotton-seed oil.

Va., Goshen—Miller-Lillich Mfg. Co., Fort Wayne, Ind., is reported to build plant.

Va., Norfolk—Paper Pulp.—Minter-Moore Printing Co. contemplates establishing plant to grind pulp from paper scraps. (See Machinery Wanted—Grinding Machinery.)

Va., Roanoke—Tire Armor.—Miller Tire Armor Co., lately noted inceptd., will manufacture steel auto tire armor. (See Metal-working Plants.)

Va., Roanoke—Creamery.—Roanoke Creamery Co., capital \$25,000, inceptd. with Monroe Garst, Pres.; W. H. Moomaw, V.-P.; J. Allen Flora, Secy.-Treas.; will establish creamery; equipment to include pasteurizing equipment and clarifier.

Va., Roanoke—Candy.—Peerless Candy Co., W. G. Jones, Pres. and Mgr., let contract to A. L. Marshall, Roanoke, to erect 50x93-ft. 3-story-and-basement building at 322 Salem Ave. W.; brick and reinforced concrete; cost \$13,000; plans by H. H. Hinnant; will install machinery. (See Machinery Wanted—Candy Manufacturing Machinery.)

W. Va., Clarksburg—Indicators.—Index Indicator Co., capital \$10,000, inceptd. by J. W. Agnew, C. C. Morris, R. W. Agnew and others to manufacture automobile appliance known as thermindex indicator.

W. Va., Huntington—Mining Supplies.—Industrial Service Co., capital \$10,000, inceptd. by Walter S. Fulton, J. B. Kirkpatrick, L. L. Wilson and others.

MOTORS AND GARAGES

Fla., Daytona—Garage.—Green-Adler Co., Magnolia St., will open bids Sept. 1 to erect lately-noted garage; fireproof concrete-block construction; 81x110 ft.; plans by Mark & Sheftall, Jacksonville, Fla.; machine equipment is supplied. (See Machinery Wanted—Glass Cylinders.)

Fla., Jacksonville—Automobiles, etc.—Jos. H. Walsh Co., capital \$50,000, inceptd.; Jos.

H. Walsh, Pres.-Treas.; Roy A. Strout, V.-P.; E. J. Davis, Secy.

Fla., Miami—Garage.—C. F. Sulzner let contract R. F. Archibald, Miami, to erect garage; 80x45 ft.; 1 story; interlocking tile; cost \$4000.

Ky., Louisville—Automobile Repairing.—Louisville Auto Painting & Trimming Co., capital \$6000, inceptd. by Wm. M. Reed, Douglas S. Roche and Harry Wallingford.

Md., Baltimore—Garage.—Autocar Sales & Service Co., J. Wilson Leakin, Owner, 813 Fidelity Bldg., let contract B. F. Bennett Bldg. Co., 123 S. Howard St., to erect garage at 1307-1309 Cathedral St.; 4 stories; 60x130 ft.; mill construction; Oliver B. Wight, Archt., Munsey Bldg., Baltimore. (Lately noted.)

Ga., Rome—Garage.—Alto Garage & Supply Co. organized; W. A. Qualles, Pres.; F. M. Kennedy, V.-P.; C. N. Burks, Mgr.; leased building; has purchased general automobile repair and shop equipment. (Lately noted inceptd.)

N. C., Winston-Salem—Automobiles.—Auto Repair Co., capital \$25,000, inceptd. by H. W. Masten, E. R. Swain and C. H. Swain.

N. C., Winston-Salem—Automobile Repairing.—Auto Repair Co., capital \$25,000, inceptd. by H. W. Masten, E. R. Swain and C. H. Swain.

S. C., Charleston—Automobiles.—General Motor & Specialty Co., capital \$50,000, inceptd. by Lionel K. Legge and Jas. Allan.

Tex., Abilene—Automobiles.—Oldham Motor Co., capital \$10,000, inceptd. by Mrs. Minnie H. Oldham, D. M. Oldham, Jr., and J. V. Howerton.

Tex., Brownwood—Garage.—J. L. Morgan let contract to H. C. Barnett to erect lately-noted 55x100-ft. ordinary-construction garage; cost \$3500; will install hand elevator. (See Machinery Wanted—Elevator.)

Va., Newport News—Garage.—John B. Kimberly of Old Point, Va., let contract C. Taylor Holtzclaw, Hampton, Va., at \$9000 to erect garage; brick; 75x95 ft.

Va., Newport News—Garage.—W. R. Chackelford let contract R. V. Richardson of Newport News to erect garage; brick; 50x128 ft.; cost \$8000.

ROAD AND STREET WORK

Ala., Clanton—Chilton county will gravel road from Clanton to Lock 12, now being graded by W. T. Taylor; bids until Apr. 15; E. B. Deason, Judge of Probate; R. L. Kennan, County Engr. (See Machinery Wanted—Road Construction.)

Ala., Selma.—Dallas county will clear, grade and gravel road from Safford to Wilcox county line near Alberta, on line of proposed Jackson Highway, about 5½ mi.; Court of County Revenues receives bids until Apr. 17; W. O. Crisman, County Engr.; lately noted. (See Machinery Wanted—Road Construction.)

Ark., Little Rock.—Comms. Street Improvement Dist. No. 244, W. H. Mann, Secy., Little Rock, and Street Improvement Dist. No. 9, H. D. McCowan, Secy., Pulaski Heights, let contract I. P. Shelby & Co., Little Rock, at \$65,900 to improve streets; 40,000 cu. yds. grading, 41,000 lin. ft. curbs and gutters, 55,000 sq. yds. paving; Dickinson & Watkins, Engrs., Little Rock. (Call for bids lately noted.)

Ark., Mena.—Polk County Comms. will issue bonds to build 58-mi. rock road from north to south in county, through Eagleton, Acorn, Mena, Rust, Hatfield, Cove, Janssen, Wicks and Granville; State Highway Engr. H. R. Carter is completing survey; A. E. Ware, County Judge. (Lately noted to cost \$180,000.)

Fla., Fort Meade.—City let contract to Southern Clay Mfg. Co., Chattanooga, Tenn., to construct brick paving; \$7000 available; Engr., Jaudon Engineering Co., Savannah, Ga. (Additional bonds for \$7000 lately noted voted to complete paving from Broadway and Cleveland St. to river bridge.)

Fla., Fort Lauderdale.—Broward county, Special Road and Bridge Dist. No. 2, voted \$170,000 bonds to improve roads in territory between Calahatchee and Hallandale, including boulevard to beach from Fort Lauderdale and improvement of roads already built at Dania and Hallandale. (Lately noted.)

Fla., Jacksonville.—City will construct 20,000 to 45,000 sq. yds. vitrified brick paving and wood curbing in connection with paving at municipal docks and terminals; Fort Comms., 407 Realty Bldg., receive bids until Apr. 8; J. C. O'Dell, Gen. Mgr., 405 Realty Bldg. (See Machinery Wanted—Paving.)

Fla., Kissimmee.—Osceola county, Dist. 2, 4 and 5, vote April 15 on \$250,000 bonds to construct roads and bridges. Address County Comms.

Fla., Lake City.—City will pave 21,000 sq. yds. with either modified sheet asphalt or brick, or both, and place 23,000 lin. ft. concrete curb; Board of Public Works, J. W. Layne, Secy., receives bids until Apr. 17; C. R. Horne, Engr. (See Machinery Wanted—Paving.)

Fla., Sebring.—City votes May 12 on \$50,000 bonds to improve streets; H. C. Brown, Mayor. (Lately noted to construct 30,000 sq. yds. sand-asphalt paving and 3 mi. concrete or granite curb.)

Ga., Leesburg.—Lee county voted \$80,000 bonds to construct roads and bridges and build courthouse. Address County Comms. (Lately noted.)

Ga., Metter.—City votes Mch. 30 on bonds to improve streets. Address The Mayor.

Ky., Edmonton.—Metcalf county voted on \$33,000 bonds to improve roads. Address County Comms. (Lately noted as contemplating construction 20 mi. roads.)

Ky., Hopkinsville.—Christian County Commissioners will construct macadam roads; date of opening bids not set; engineer not selected; Walter Knight, County Judge. (Lately noted voting \$400,000 bonds to build 100 mi. road and 4 or 5 bridges.)

Ky., Jamestown.—Russell county, A. M. F. Hill, County Judge, will construct roads and bridges; cost of work estimated at \$75,000; \$40,000 available; date for bids not set; Engr., F. W. Leach, Jamestown.

Ky., Maysville.—City let contract Carey-Reed Co., Lexington, to pave 2d St.; 15,000 yds.; sheet asphalt; cost \$45,000.

Ky., Milburn.—City will issue \$3000 bonds to grade and gravel streets. Address The Mayor.

Ky., Paducah.—City Comms. contemplate street and sidewalk reconstruction.

Ky., Somerset.—Pulaski County Fiscal Court will issue \$300,000 bonds to construct roads; R. F. Jasper, County Judge.

La., Benton.—Bossier Parish, Road Dist. No. 2 will construct hard roads; \$50,000 available, also State aid; will open bids Apr. 11; official in charge, J. C. Logan, Benton, R. F. D. No. 2; W. E. Atkinson, New Orleans, Engr. (See Machinery Wanted.)

La., Monroe.—Ouachita parish, W. A. O'Kelly, Clerk Police Jury, will vote 5-mill tax for road construction; if carried, will construct about 100 mi. road.

La., Shreveport.—Caddo parish will construct about 15 mi. gravel road; open bids April 13 on about 9 mi. and about April 25 on 6 mi.; J. T. Bullen, Parish Engr.; lately noted. (See Machinery Wanted—Road Construction.)

Md., Baltimore.—City let contract P. Flanagan & Sons, Harford Rd. and B. & O. R. R., at \$28,000 to pave Ellicott Driveway with concrete.

Miss., Indianola.—Sunflower county is reported to vote on \$1,000,000 bonds to construct roads. Address County Comms.

Miss., Pass Christian.—City will have street-improvement plans ready in 4 weeks; cost \$30,000; Xavier A. Kramer, Magnolia, Miss., Engr. (Noted in Jan.)

Miss., Ripley.—Tippah county let contracts to W. Braddock, W. C. Johnson, L. Smith, Frank Dunham and C. Birdsong to construct earth roads. (Lately noted voting \$9000 bonds.)

Mo., Alton.—Oregon county, Koshkonong Special Road Dist., voted \$10,000 bonds to improve roads. Address County Comms.

Mo., Bethany.—Harrison County Comms. will invite bids in about 2 weeks to construct race track requiring removal of 10,000 to 12,000 yards dirt.

Mo., Cassville.—Barry county, Monett Special Road Dist., votes April 18 on road construction. Address County Comms.

Mo., Cassville.—Barry county, Verona Special Road Dist., will vote on bonds for road construction. Address County Comms.

Mo., Cassville.—Barry county, Monett Special Road Dist., contemplates special bond issue of \$60,000 to construct roads. Address County Comms.

Mo., Monett.—City let contract M. E. Gillois to curb and gutter 6th St. from Front to Benton St.

Mo., Mt. Vernon.—Lawrence county, Aurora Special Road Dist., voted \$60,000 bonds to construct rock road to be link in proposed Joplin-Springfield highway. Address County Comms.

Mo., St. Louis.—City let contract Eyer-mann Construction Co. of St. Louis at \$24,689, \$3030 and \$2750 to improve sections of Koeln St., Sarah Ave. and Chouteau Ave.; Skrainka Construction Co., Security Bldg., St. Louis, at \$16,954, \$2855 and \$10,220, respectively, to improve sections of January Ave.,

Cooper St. and Daggett Ave.; E. R. Kinsey, Prest. Board of Public Service.

Mo., Waynesville.—Pulaski County Comms. let contract Pioneer Tractor Co. at \$5000 to construct 26 mi. road; cost \$5000. (Lately noted.)

N. C., Asheville.—City, F. L. Conder, Secy.-Treas., will construct 15,000 to 25,000 sq. yds. concrete paving, 10,000 to 20,000 sq. yds. brick, bitulthic, sheet asphalt, asphalt concrete (Topeka specifications) or bituminous macadam, and about 5000 sq. yds. concrete foundation; bids until Apr. 10. (See Machinery Wanted—Paving.)

N. C., Monroe.—City, G. S. Lee, Jr., City Clerk, contemplates bitulthic or asphalt street paving; plans not completed.

N. C., Shelby.—Cleveland county, No. 5 township, votes Apr. 29 on \$30,000 bonds to improve roads. Address County Comms.

N. C., West Asheville.—City let contract to Noll Construction Co., Chattanooga, Tenn., for 33,000 sq. yds. sheet asphalt paving; Chas. E. Waddell, Engr., Asheville. (Bids lately noted.)

Okla., Blackwell.—City Council adopted plans by Benham Engineering Co., Oklahoma City, for paving with vitrified brick block 21 blocks in business and residence district; estimated cost \$110,000. (Lately noted.)

Okla., Lawton.—Government will construct driveway crossings, sidewalks, curb and gutters on Gore Blvd.; Dept. of Interior, Andrious A. Jones, First Asst. Secy., Washington, D. C., receives bids until Apr. 18. (See Machinery Wanted—Paving.)

S. C., Beaufort.—Beaufort County Comms. will use lately-noted bond issue of \$30,000 for work already completed.

Tenn., Chattanooga.—City will pave with sheet asphalt Whiteside St. from Main to 25th St.; Paving Dist. No. 194; E. D. Bass, Commr. Dept. of Streets and Sewers, receives bids until Apr. 4. (See Machinery Wanted—Paving.)

Tenn., Elizabethton.—Carter County Commissioners, L. D. Gastelger, Braemar, Tenn., Secy., will macadamize about 70 mi. graded roads; open bids Apr. 1; this road was noted in Nov., 1915, with construction begun and completion contemplated in about 18 months. (See Machinery Wanted—Road Macadamizing.)

Tenn., Morristown.—Hamblen county will grade and macadamize 40 mi. public highway and streets; Turnpike Comms., W. D. Bushong, Chrmn., receive bids until April 1; to include furnishing of vitrified drain pipe, concrete and stone masonry; Henry B. Havelly, Engr., Morristown. (See Machinery Wanted—Road Construction.)

Tenn., Newport.—City issued \$5000 bonds for additional street improvements. Address The Mayor.

Tenn., Pulaski.—Giles county defeated \$500,000 bonds to construct roads and purchase toll pikes; R. B. Dade, County Judge. (Lately noted.)

Tex., Corpus Christi.—Nueces county, Road Dist. No. 9, votes April 22 on \$10,000 bonds to construct roads. Address County Comms.

Tex., Georgetown.—Williamson county, Hutto precinct, voted \$50,000 bonds to construct roads; macadamize about 16 mi. Address County Comms. (Lately noted.)

Tex., El Paso.—El Paso County Comms. let contract Lee Moor Construction Co. at \$77,368.50 to resurface with concrete Doniphan's Drive, extending from El Paso, 20 mi. north along east bank of Rio Grande to New Mexico line at Anthony; 7 mi. to be built this season; width, 18 ft.; bridges to be of reinforced concrete; construction under supervision of Chas. E. Henning, County Engr., El Paso.

Tex., Hillsboro.—Hill county, Road Dist. No. 2, will construct about 30 mi. gravel roads by force account; no contracts; \$150,000 available; J. D. Miller, Engr., Itasca, Tex. (Bonds noted issued in Jan.)

Tex., Houston.—Harris County Comms. will pave Harrisburg Rd. with asphaltic concrete; Lester Levy of Dallas is lowest bidder at \$141,927.50 on 5 different grades of asphaltic concrete and \$147,777.50 for best grades; \$240,000 bonds voted. (Lately noted.)

Tex., Houston.—City will pave following streets with 8 inches of gravel: Welch St. from Euclid Ave. to G. H. & S. A. Ry.; Congress Ave. from Velasco to Sampson St.; Preston Ave. from Roberts to York St.; Roberts St. from Congress Ave. to Harrisburg Blvd.; York St. from Preston Ave. to Harrisburg Blvd.; bids received at office of City Secy. until Mch. 31; Ben Campbell, Mayor. (See Machinery Wanted—Paving.)

Tex., Quitman.—Wood county, Road Dist. No. 2, votes April 20 on \$240,000 bonds to con-

struct about 50 mi. graveled and macadamized roads. Address County Comms.

Tex., Wichita Falls.—City let contract to I. H. Roberts, Wichita Falls, to construct 5400 sq. yds. concrete paving; \$12,000 available; L. C. Hinekey, City Engr. (Lately noted.)

Va., Christiansburg.—Montgomery County Supvrs. will issue \$100,000 bonds to construct roads.

Va., Isle of Wight.—Isle of Wight County Supvrs. will construct sand-clay road from Benn's Church to Point of Marsh wharf; cost \$2600.

Va., Harrisonburg.—Rockingham county, Stonewall Dist., defeated vote on \$95,000 bonds for road construction; J. F. Blackburn, Clerk. (Noted in February.)

Va., Princess Anne.—Princess Anne county, Kempsville Dist., is reported to vote on \$150,000 bonds to construct roads. Address County Comms.

Va., Rustburg.—Campbell county, Seneca Dist., will vote on \$40,000 bonds to improve roads. Address County Comms.

W. Va., Elkins.—Randolph county, Leads-ville Dist., voted \$220,000 bonds to improve 22 mi. of roads. Address County Comms. (Noted in Feb.)

W. Va., Fairmont.—Marion county, Paw-Paw Dist., defeated vote on \$360,000 bonds for road construction; A. G. Martin, County Clerk. (Noted in March.)

W. Va., Warwood.—City is considering improvement of streets; may vote on bonds. Address The Mayor.

W. Va., Weston.—Lewis county will improve 4 roads leading out of Weston; 5280 ft. Staunton and Parkersburg turnpike; 4350 ft. Weston and Beverly turnpike; 2350 ft. Weston and Gauley Bridge turnpike; 1945 ft. Weston and Clarksburg turnpike; County Comms., Leander Troxell, Clerk, receive bids until April 24. (See Machinery Wanted—Road Construction.)

SEWER CONSTRUCTION

Ala., Piedmont.—City is having surveys made by J. B. McCrary Co., Atlanta, Ga., for sewer system.

Fla., Jacksonville.—City will construct 18 mi. sanitary and storm sewers varying from 8 to 54 in.; Bond Trustees, Gustav Muller, Acting Chrmn., receive bids until April 14; work divided into 7 sections and bids will be received on each section separately; L. D. Smoot, Commr. of Public Works. (See Machinery Wanted—Sewer Construction.)

Ga., Hogsheadville.—City votes Apr. 12 on \$10,000 bonds to construct sewer system. R. H. Utting, Clerk of Council.

Ga., Savannah.—City will extend sewer at foot of W. Broad St.; bids received at office Clerk of Council until Apr. 4; E. R. Conant, Purchasing Officer. (See Machinery Wanted—Sewer Construction, etc.)

Ky., Louisville.—Board of Public Works let contract J. H. Cahill Co., Louisville, at \$11,000 to construct F and Brandeis Sts. sewers.

Ky., Louisville.—Board of Public Works let contract to J. H. Cahill, 1540 S. 9th St., Louisville, at \$12,000 for sewer construction; 15 to 30 vitrified pipe; no equipment needed. (Bids lately noted.)

La., Amite.—City sewer construction plans will be ready in about 60 days; Engr., Xavier A. Kramer, Magnolia, Miss.; sewer and water-works construction estimated to cost \$50,000. (Lately noted.)

Md., Baltimore.—State Roads Com. (not city, as lately incorrectly stated) will construct 2000 lin. ft. sewer with necessary inlets, manholes and connections on Baltimore county approach to Hanover-St. bridge, Contract No. BC-17, Section 11; also 5000 cu. yds. of excavation, Contract No. BC-17, Section 12; State Roads Com., 601 Garrett Bldg., receives bids until Apr. 11. (See Machinery Wanted—Sewer Construction, etc.)

Mo., Kansas City.—City was lately incorrectly noted as having sewer construction plans prepared by Black & Veatch, Inter-State Bldg., Kansas City.

N. C., Kinston.—City will extend sewer system to Rhodes Heights. Address The Mayor.

N. C., Nashville.—City, W. L. Lincke, Mayor, asks bids until Apr. 7 on materials for lately-noted sewer construction; includes 3 mi. 8 and 10-in. sewer pipe; J. B. McCrary Co., Engr., Atlanta, Ga. (See Machinery Wanted—Water-works, Electric Light and Sewer Materials.)

N. C., Reidsville.—Town Comms. will issue \$10,000 additional sewer bonds.

Okla., Blackwell.—City contemplates construction of storm sewer system; Benham

Engineering Co., Engr., Oklahoma City. (See Water-works.)

Okla., Tulsa.—City will construct sanitary sewer systems in Sewer Dist. Nos. 33, 34 and 104; bids until Mch. 30; T. C. Hughes, City Engr. (See Machinery Wanted—Sewer Construction.)

Tenn., Jackson.—City will vote on bonds to extend sewer system. Address The Mayor.

Tenn., Newport.—City issued \$5000 bonds for sewer and water system extension. Address The Mayor.

Tenn., Nashville.—City will construct circular brick trunk sewer from and connecting with Second Ward trunk sewer at 2nd Ave. to N. Clay and 10th Ave.; Board of Comms., J. W. Dashiell, Secy., receives bids until Apr. 4; plans and specifications on file with City Engr.; Robt. Ewing, Mayor. (See Machinery Wanted—Sewer Construction.)

Va., Williamsburg.—Channing Hall, Atty., representing Mr. Farley of Richmond, Va., applied for franchise to construct sewer system.

TELEPHONE SYSTEMS

Ark., Batesville.—Southwestern Telephone Co. is reported as contemplating expenditure of \$18,000 for improvements.

Okla., Alva.—Manilla Telephone Co. Incptd. by C. R. Williamson, John Murray, Jr., John Hendricks and W. L. Grantham.

Okla., Amarita.—Mendon & Waldron Telephone Co. Incptd. by E. M. Potter, A. I. Swen and T. H. Bodkins.

Okla., Shawnee.—Pioneer Telephone & Telegraph Co. plans to erect exchange and office building; 2 stories; cost \$100,000.

S. C., Greenville.—Southern Bell Telephone & Telegraph Co. (main office, Atlanta, Ga.) is reported to construct telephone system from Greenville to River Falls and to Caesar's Head.

TEXTILE MILLS

Ala., Athens.—Cotton Yarns.—Fulton Cotton Mill Co. contemplates adding 300 spindles with complementary carding machinery, twistors and winders about Jan., 1917; install in building originally intended for looms; has decided upon machinery contractors.

Ga., Albany.—Cotton Goods.—Flint River Cotton Mills, capital \$250,000, incptd. by E. F. Putney, E. E. Wetherbee, J. K. Pray and J. R. Wetherbee; operate former Albany Cotton Mills.

Ga., Atlanta.—Absorbent Cotton.—Jos. F. Vickery, P. O. Box 450, may establish mill for absorbent cotton. (See Machinery Wanted—Cotton Machinery.)

Ga., Macon.—Hosiery.—Southland Knitting Mills will build 100x40-ft. addition and add new finishing machinery; has let contracts.

Md., Frostburg.—Hosiery.—Parker Hosiery Mill has final plans for addition; 3 stories; 56x23 ft.; concrete storage basement; fire escapes; maple floors; lighting and ventilating system; will install additional new machinery, comprising 60 knitting machines, 35 loopers and 63 ribbers. (Lately noted.)

N. C., Boone.—Carpet Weaving, etc.—Appalachian Training School will erect building and equip to weave carpets, rugs, towels, etc.

N. C., Cedar Falls.—Cotton Cloth.—Sapona Cotton Mills succeeds Cedar Falls Mfg. Co.; plant purchased in Feb. by W. J. Armfield and associates, incorporators of new company. (Lately noted under Asheboro, N. C., as incptd. with \$125,000 capital.)

N. C., Cherryville.—Knit Goods.—R. J. Morrison may build knitting mill. (See Machinery Wanted—Knitting Machinery.)

N. C., Troy.—Hosiery.—Troy Knitting Mill Co. plans building additions or adding new machinery.

N. C., Elizabeth City.—Hosiery.—Pasquet tank Hosiery Co. will add knitting machines in a few months; has 92 knitters.

S. C., Trough.—Cotton Goods.—Pacolet Mfg. Co. has no plans for building bleachery; recent report was an error.

Tenn., Chattanooga.—Aseptic Cotton Products.—Chattanooga Aseptic Cotton Co. has plans by Clarence Jones, Chattanooga, for rebuilding burned plant; erect 1-story concrete and brick mill building, 250x50 ft.; install machinery, including electric drive, for manufacturing aseptic cotton products. (Lately noted.)

Va., Bristol.—Hosiery.—Davis Hosiery Mills, Chattanooga, Tenn., will invest \$30,000 to build branch mill; first main building 3 stories; 130x80 ft.; concrete foundation with brick walls; abundant window space; Stone-Huling Lumber Co., Contr., Bristol.

Va.; machinery space for daily capacity 2000 doz. prs. hose; initial installation for 1000; later increase to 2000; ship hosiery to Chattanooga plant for dyeing.

Va., Virginiana-Hosiery.-Virginiana Hosiery Mills may add new knitting machines.

WATER-WORKS

Fla., Jacksonville.-Jacksonville Tripure Water Co., capital \$10,000, incptd. by I. J. Brooks, H. J. Nelson, R. P. Oppenheimer and others.

Fla., Tavares.-W. F. L. Barrett, Houghton, Mich., has franchise for water-works, ice and cold-storage plants and electric-light system; will erect buildings.

Ga., Athens.-City votes April 29 on \$40,000 bonds to extend and improve water-works; 9,000-gal. settling tank; R. O. Arnold, Mayor. (Lately noted.)

Ga., Hogansville.-City votes Apr. 12 on \$5,000 bonds to construct water-works. R. H. Utting, Clerk of Council.

Ga., Tybee.-Central of Georgia Ry., C. K. Lawrence, Ch. Engr., Savannah, Ga., will install pumping and electric-light plants; has ordered equipment to include 20,000-gal. iron water tank; machinery contract let to Georgia-Carolina Utilities Co., Savannah, Ga.

Ky., Covington.-City will probably construct water-purification plant late in this year or early in 1917; funds not yet available; will probably install sedimentation process, with coagulant combined with sterilizing equipment, according to report previously submitted by Geo. Hornung, Const. Engr., Newport, Ky.; as proposed, plant would have daily capacity of 10,000,000 gals.

Ky., Trenton.-South Kentucky Power & Light Co. has franchise for water-works.

La., Anite.-City water-works plans will be ready in about 60 days; Xavier A. Kramer, Engr., Magnolia, Miss.; water-works and sewer construction estimated to cost \$50,000. (Lately noted.)

La., Ville Platte.-City, J. M. Corell, Mayor, will reconstruct pumping station and electric-light system; estimated cost \$15,000; Engr. X. A. Kramer, Magnolia, Miss.; noted in Feb. (See Electric Plants.)

Miss., McComb.-City will lay 1500 ft. 4-in. water mains; bids until Apr. 15; L. H. Marsalis, Clk. (See Machinery Wanted-Water Mains.)

Miss., Pass Christian.-City will expend \$15,000 to construct water-works; Xavier A. Kramer, Magnolia, Miss., Engr.; plans will be ready in 4 weeks. (Noted in Feb.)

N. C., Nashville.-City, W. L. Lincke, Mayor, asks bids until Apr. 7 on materials for lately-noted water-works; includes 60,000-gal. tank on 75 or 100-ft. tower, and drilling 10-in. well; also 4850 ft. 8-in. and 7840 ft. 6-in. cast-iron pipe; J. B. McCrary Co., Engr., Atlanta, Ga. (See Machinery Wanted-Water-works, Electric Light and Sewer Materials.)

N. C., Wilson.-City, E. F. Killette, Mayor, asks bids until Apr. 6 (postponed date) to construct lately-noted water-works improvements; includes remodeling of building, a filter plant of 3,000,000 gals. ultimate capacity, concrete coagulating basin, 1,000,000-gal. concrete-lined reservoir, etc. (See Machinery Wanted-Water-works Improvements and Gas Plant.)

Okla., Blackwell.-City contemplates improvements to water, electric light and sewer systems; will call election to vote on about \$60,000 bonds; Benham Engineering Co., Oklahoma City, Engr.; plans are to rebuild water and light plant by installing new boilers and generating units, build intake in river, construct white-way in business district and install system of storm sewers.

S. C., St. George.-City voted \$15,000 bonds to construct water-works. Address The Mayor.

Tenn., Newport.-City issued \$5000 bonds for water and sewer system extension. Address The Mayor.

Tex., Barstow.-City engaged Tri-State Engineering Co., 318 First National Bank Bldg., El Paso Tex., to make surveys and prepare plans and specifications for water-works; install meters, pumping machinery, pipe, Diesel engines, etc.

Tex., Seadrift.-City contemplates voting on bonds to construct water-works. Address The Mayor.

Tex., Tronp.-City contemplates expenditure of \$17,000 to construct water plant. Address The Mayor. (Lately noted to vote on bonds Apr. 18.)

Tex., Victoria.-City will construct two artesian wells to increase water supply; City Secy. will receive bids.

Va., Radford.-Radford Water Co. will issue \$200,000 bonds, of which \$25,000 to \$30,000 will be expended for water supply system and about \$75,000 issued from time to time as necessary for further development; plans completed for water supply system; secure water from New River; install pumping station with filter plant near river and connection, with 12-in. pipe, made with present system; pumping station to have double equipment of electric centrifugal pumps.

W. Va., Cameron.-City voted \$30,000 bonds to improve water-works. Address The Mayor. (Lately noted.)

W. Va., Cameron.-Baltimore & Ohio R. R., F. L. Stuart, Ch. Engr., Baltimore, Md., is reported as considering erection of water plant to supply locomotives.

WOODWORKING PLANTS

Ark., West Memphis.-Cooperage.-Earle Cooperage Co., A. Sweeney, Earle, Ark., will build \$60,000 plant for manufacturing cooperage and other wood products; develop 10,000 acres timber.

Fla., Bradentown.-Boxes, etc.-John A. Graham of Bradentown and Schroeder Mills & Timber Co. of Milwaukee, Wis., are reported as contemplating establishment of box factory and woodworking plant. (See Lumber Manufacturing.)

Ga., Chatsworth.-Empire Lumber & Lumber Co. organized; purchased woodworking plant of Ramhurst Lumber Co.; will install additional machinery.

Ky., Sergeant-Staves.-L. Dow Collins purchased Craft timber boundary on North Fork; reported to install mills to manufacture staves.

Miss., Laurel-Box Shooks.-Eastman, Gardner & Co. will establish factory to manufacture box shooks; daily capacity 15,000 ft.

N. C., Hickory.-Building Materials.-Hickory Mfg. Co. will rebuild burned plant; brick; 75x216 ft.; concrete floor.

S. C., Orangeburg.-Veneer.-Hamilton-Hill Veneer Co., capital \$30,000, incptd.; Rudolph Moller, Pres.; V. J. Hill, Secy.-Treas.

Tenn., Binghamton-Barrels.-Chickasaw Cooperage Co. will increase daily capacity of plant from 1000 bbls. to 3500 bbls. and 1500 kegs.

Tenn., Memphis-Flooring.-DeSoto Hardwood Flooring Co. let contract J. W. Lindsey to erect concrete and fireproof tile dry-kiln; cost \$5000.

W. Va., Huntington-Interior Finish.-Huntington Hardwood Co., capital \$50,000, incptd. with W. E. Altizer, Pres.; A. B. Neighborgall, V.-P.; A. K. Kessler, Treas.; J. R. Henderson, Secy.; A. J. Lacey, Gen. Mgr.; purchased plant of National Interior Finish Co.

FIRE DAMAGE

Ala., Birmingham.-J. H. Atkins' residence at 1613 5th Ave.

Ala., Birmingham.-Residence of C. A. Lloyd, Prin. of Training School at Birmingham College.

Ala., Decatur.-Luke Pryor's gin.

Ala., Florala.-Florala Saw Mill Co.'s dry-kiln and lumber sheds; total loss, including lumber, \$25,000 to \$30,000.

Ala., Greensboro.-Stollenwerck's Drug Store, Johnson-Winn Millinery Store, Southern Bell Telephone Exchange, Turner cotton office; loss about \$10,000.

Ala., Stevenson.-Geo. Cowan's residence, barn and outbuildings.

Ark., Alicia.-John A. Arnold's residence, R. E. Jones' Hotel, Smith Drug Co.'s store, Woodmen's Hall, Andrews Mercantile Co.'s store, St. Louis, Iron Mountain and Southern Ry.'s tank and pump-house. (E. A. Hadley, Ch. Engr.); total loss \$15,000.

Ark., Batesville.-Gairner Duffy's residence.

Ark., Hobart.-Interstate Compress Co.'s plant and 7000 bales cotton; total estimated loss \$400,000.

Ark., Little Rock.-A. Tenenbaum's building; loss \$15,000; M. M. and A. D. Cohn's building; loss \$6000.

Ark., Plummerville.-Jennings Hotel, owned by E. S. Jennings, Ft. Smith, Ark.; Plummerville Pilot's Bldg., also owned by Mr. Jennings; Jackson Jewelry Co.'s store; Caruthers Co.'s warehouse; Cloverleaf Hotel, owned by W. M. Taylor; St. Louis, Iron Mountain & Southern Ry.'s Depot; total loss \$25,000.

Ark., Rogers.-N. B. Perry's residence; loss \$3000.

Fla., Marianna.-Dillon & Dillon's Storage Barns and Stables, cotton warehouse of Marianna Warehouse Co., warehouses and sheds of Daniel & Milton, First Baptist Church

(address The Pastor), and other structures; total loss \$75,000.

Fla., Jacksonville.-W. O. Southwell's residence; loss \$5000.

Fla., Tampa.-Frank Wing's residence near Sulphur Springs; loss \$7000.

Ga., Atlanta.-Marbut-Thornton Lumber Co.'s plant; estimated loss \$40,000 to \$50,000.

Ga., Atlanta.-Mrs. J. H. Harris' residence; loss \$5500; Jewish Temple, Shalreith Israel (Address The Rabbi); loss \$6000.

Ga., Augusta.-Union Compress Co.'s cotton warehouse compartment; loss \$88,000.

Ga., Augusta.-Following buildings destroyed: Dyer Bldg., loss \$750,000; Richards' Stationery Co., \$25,000; Warren buildings and contents, \$150,000; Union Savings Bank Bldg., \$60,000; Postal Telegraph, \$17,000; Empire Life Insurance Bldg., \$300,000; Chronicle Bldg., \$180,000; John J. Evans Co., \$30,000; Western Union Telegraph Co., \$15,000; Schneider Bldg., \$15,000; Herald Bldg., \$15,000; Commercial Club, \$35,000; Masonic Temple, \$30,000, and the Irish-American Bldg., \$25,000; Masonic Temple, Young Women's Christian Association and Tubman High School, the historic St. Paul's Episcopal Church and the Horton Grammar School; buildings damaged are: the Citizens' Southern Bank Bldg., the Planters' Loan and Savings and the Georgia Railroad Bank buildings.

Ga., Camilla.-Camilla Grocery Co.'s warehouse; loss \$160,000.

Ga., Crawford.-Tom Bray's residence.

Ga., Fairfax.-J. R. and T. Bunn's sawmill; estimated loss \$10,000.

Ga., Rome.-Judge Moses Wright's dwelling.

Ga., Swainsboro.-J. A. Coleman's 5 dwellings.

Ky., Barbourville.-Buildings owned by L. C. Miller and occupied by Bingham Grocery Co. and Barbourville Electric Co.; loss about \$10,000.

Ky., Columbia.-Lewis Compton's residence and barn.

Ky., Louisville.-William Gilmore's residence, near Aubondale; loss several thousand dollars.

Ky., Paducah.-John W. Carroll's residence; loss \$3000.

La., Alexandria.-J. W. Dall's residence.

La., Covington.-Henry B. Pruden's residence 4 miles west of Covington; loss \$10,000.

La., Pineville.-Andrew David's residence; owned by John W. Ball.

Md., Baltimore.-Building at 406-47 W. German St., occupied by Henry Keldel & Co., and owned by Keyser estate; loss on building \$30,000.

Md., Hallethorpe.-Three-story brick building of Baltimore Manual Labor School at Arbutus; loss \$60,000.

Md., Whitehall.-William H. Nelson's residence; loss \$30,000.

Miss., Cleveland.-Dr. E. R. McLean's residence; loss \$6000.

Miss., Magnolia.-J. H. Sandifer's sawmill, grist mill, rice mill and gin.

Miss., Natchez.-Natchez Dressed Beef Co.'s plant damaged; loss \$30,000 to \$50,000.

Miss., Natchez.-W. D. Mounger's residence; loss \$5000.

Mo., St. Louis.-Earle and W. B. Sappington's residence; loss \$30,000.

N. C., Bennett.-Two buildings owned by Flat Creek Supply Co.; loss \$9000.

N. C., Greensboro.-Penfield Hosiery Mill's dyehouse.

N. C., Kinston.-Rutledge & Co.'s main building of lumber plant; loss \$15,000.

N. C., Lumber Bridge.-Henry M. John's residence.

N. C., McDonald.-McDonald Hotel, Everett Hardware Co.'s explosives storehouse; total loss \$8000.

N. C., Spray.-M. L. Heiner's building, loss \$10,000; O. L. Robertson's store, loss \$3000; Martin Bros.' store, loss \$3000.

Okla., Collinsville.-Evans Grocery Co.'s store, owned by John Baker; loss \$10,000.

S. C., Barnes.-E. Richard Bonds' residence; loss \$3000.

S. C., Columbia.-E. Talley Tarrer's warehouse at 2130 Main St.

S. C., Chester.-Dr. S. W. Pryor's hospital; loss \$35,000.

S. C., Orangeburg.-Brick dormitory of State College for Colored People; loss \$30,000.

S. C., Estill.-D. I. Peeples' residence on Church St.

S. C., Union.-Dr. J. C. Goling's residence.

S. C., Yorkville.-A. S. Barran's stable and residence.

Tenn., Chattanooga.-J. H. Allison's residence, loss \$8000; W. F. McBroom's residence, loss \$9000.

Tenn., Copperhill.-Carcolite Chemical Co.'s plant; loss reported as exceeding \$250,000; controlled by Tennessee Copper Co., 2 Rector St., New York.

Tenn., Dresden.-M. L. Pinkston's sawmill.

Tenn., Harriman.-Lewis W. Gensland's residence.

Tenn., Knoxville.-Hotel Imperial, owned by Imperial Realty Co.; Royal Hotel, owned by J. Allen Smith; Tripure Water Co.'s plant; total loss \$100,000 to \$200,000.

Tenn., Lewisburg.-American Pencil Co.'s plant; W. E. Sharp's sawmill; loss \$3000.

Tenn., Medina.-Jacobs & Co.'s Restaurant; Andrew & Sons Store; loss \$15,000.

Tenn., Nashville.-East Nashville Sub-Post-office; Edgely Baptist parsonage (address The Pastor); Little Sisters of the Poor's building; Woodland St. Presbyterian Church (address The Pastor); Woodland St. Christian Church (address The Pastor); Warner School; St. Columba's Church and School (address The Pastor); Home Building & Manufacturing plant and other structures; total loss \$1,500,000.

Tenn., Paris.-Colored Methodist church; loss \$4500. Address The Pastor.

Tenn., Shelbyville.-W. S. Tipton's bungalow.

Tenn., Solway.-Residence of Dan Qualis, Knoxville, Tenn.

Tex., Anson.-East Gin plant; loss \$15,000.

Tex., Bonham.-Smith Livery Co.'s stable, F. M. German's blacksmith shop, Will McDowell's residence; loss \$3500.

Tex., Boyd.-City Hotel, owned by J. H. Stokes; loss \$4000.

Tex., Carrizo Springs.-D. C. Richey's residence and garage.

Tex., Ft. Worth.-P. H. Parsons' dwelling in South Ft. Worth.

Tex., Houston.-Cotton sheds of Missouri, Kansas & Texas Ry.; L. F. Lonnbladh, Chief Engr., Dallas.

Tex., Kaufman.-Farmers & Merchants' National Bank Bldg. was not damaged by fire, as lately reported.

Tex., Lockhart.-Missouri, Kansas & Texas R. R.'s passenger and freight depot; loss \$20,000; L. F. Lonnbladh, Chief Engr., Dallas, Tex.

Tex., McKinney.-McKinney Compress Co.'s plant, several store buildings and 3000 bales cotton; total estimated loss \$500,000.

Tex., Palestine.-Henry Watts' residence; loss \$10,000.

Tex., Palestine.-Henry Watts' residence; loss \$10,000.

Tex., Paris.-Merrick Hotel; Crook, Record & Co.'s 4-story brick store building, loss \$400,000; Gibraltar Hotel, loss \$300,000; Burdett Dry Goods Co.'s stock and building, loss \$200,000; Snalley Apartments, loss \$300,000; R. F. Scott's office building; Paris Compress; Thos. Barrett, Jr.'s, residence; H. Gould Barrett's residence; Wm. Barrett's residence; Mrs. M. E. Dugas' residence; postoffice and Federal building; county courthouse and jail (address County Commissioners); Episcopal church on S. Main St. (address The Rector); Congregational church (address The Pastor); First National Bank Bldg.; city hall, jail and central fire station (address The Mayor); North Texas Dry Goods Co.'s building; Broad Bldg.; City National Bank Bldg.; American National Bank Bldg.; Paris Grocery Co.'s store; Mary Conner College; residence owned by J. J. Culbertson, Oklahoma City.

Tex., Rice.-Holmes Bros.' gin; loss \$7000.

Tex., San Antonio.-Country Club's Bldg.

Tex., Temple.-John Mahler's residence; loss \$3500.

Tex., Waco.-Waco Barber Supply & Mfg. Co.'s plant; loss on building \$5000.

Va., Amelia.-Winkle Spain's residence; loss \$3000.

Va., Carrollton.-Dr. P. P. Nottingham's residence.

Va., Gloucester.-"Rosewell," residence of Judge Fielding Lewis Taylor.

Va., Hodges Ferry.-Foreman & Derickson Veneering Co.'s plant; loss \$10,000.

Va., Norfolk.-Colonial Cereal Co.'s plant, loss on machinery \$7000; Arctic Ice Co.'s stables; loss on building occupied by cereal company and on adjoining stables, all of which are owned by Arctic Ice Co., is \$10,000.

Va., Norfolk.-Progress Bldg., occupied by Libby, McNeill & Libby, packers, loss on cold-storage plant and stock \$50,000; Bramble & Schriener, ship chandlers, loss \$40,000; Joseph Kless Sons, trousers manufacturers.

loss \$15,000; loss on building \$40,000; Hoster's Brewing Co.'s storage plant damaged, loss \$30,000.

Va., Petersburg.—William E. Armstrong Co.'s drug store; loss \$60,000; building owned by W. H. Camp estate.

W. Va., Point Pleasant.—C. F. Hess' cement plant.

WRECKED BY EXPLOSION

Ky., Pikeville.—Manuel Riddle's grist mill on Peter Creek.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—John L. Warren is having plans prepared by Hunter & Bell, Southern Bldg., Washington, for apartment-house at 17th and Fuller Sts.; 32 suites; 100 x115 ft.; 4 stories; cost \$80,000.

D. C., Washington.—Harry Wardman, 1430 K St. N. W., has plans by A. M. Schneider & Co., same address, for apartment-house at New Hampshire Ave., V and 16th Sts.; 7 stories; pressed brick exterior; limestone trimmings and base; lobby finished in ornamental plaster; stone terrace and ornamental marquise at each entrance; 53 suites of from 1 to 6 rooms; cost \$175,000.

D. C., Washington.—William A. Hill, 1422 H St. N. W., will erect apartment-house on P St. N. W.; 4 stories; 16 suites; 48x96 ft.

Fla., St. Petersburg.—Emerson M. Wood will erect apartment-house about 30x50 ft.; 3 stories and basement; cement block or brick veneer construction; asphalt or similar roofing; cost about \$12,000; construction begins about June 1; plans and construction by owner. (Lately noted.)

Ga., Atlanta.—Mrs. Addie L. Seay has plans by H. J. D. Day, Atlanta, for apartment-house at 159 Peoples St.; 3 stories; brick; six suites; cost \$20,000.

La., New Orleans.—Albert Aschaffenberg is reported to erect apartment-house or family hotel at St. Charles and Julia Sts.

Md., Baltimore.—Miles E. Mixson has plans by Walter M. Gleske, 65 Gunther Bldg., Baltimore, to convert building at St. Paul and 21st Sts. into apartments.

Mo., Kansas City.—Burt L. Elmer will erect 2-story brick apartment-houses; 5 suites; cost \$13,000.

Mo., Kansas City.—G. W. Ellsworth will erect store and flat building. (See Stores.)

Mo., Kansas City.—R. A. Doutsos will erect two flat buildings; four apartments each; cost \$12,000.

Mo., Kansas City.—W. J. Clark will erect store and flat building. (See Stores.)

Mo., St. Louis.—Andrew Craig will erect apartment-house; three stories; three six-room suites with sleeping porches and sun parlors.

Mo., St. Louis.—E. L. Wagner Construction Co. will erect apartment-house on Clemens Ave.

Mo., St. Louis.—Victor Rhodes Building Co. will erect six-family apartment building on E. Gates Ave.

Mo., St. Louis.—Pomo Realty & Investment Co. will erect two apartment-houses on Delmar Blvd.; 8 rooms, sun parlor and sleeping porch; cost \$80,000; Norman D. Howard, Archt., 5899 Delmar Ave., St. Louis.

Mo., St. Louis.—Herman C. Metz will erect apartment-house on West Pine St.; six 6-room suites with sun parlor and sleeping porches.

Mo., St. Louis.—Hagall Realty & Investment Co. acquired site 224x213 ft. on W. Pine Blvd.; will utilize 60 ft. for erection of 3-family apartment-house and sub-divide remainder for residence or apartment sites.

Mo., St. Louis.—Sam Kopler Realty & Building Co. will erect three tenement-houses. (See Dwellings.)

Mo., St. Louis.—Girard Realty & Building Co. will erect two 2-story tenement-houses at 5040-42 Murdock St.; cost \$9000; construction by owner.

Mo., St. Louis.—Guarford Real Estate & Investment Co. will erect two 3-story tenements at 5735-29 Westminster St.; cost \$15,000; also erect 1-story garage; cost \$900; construction by owner.

N. C., Charlotte.—E. C. Griffith has plans for store and apartment building. (See Stores.)

Tenn., Memphis.—C. Hardy Jones will erect brick apartment building; cost \$6000.

Tenn., Memphis.—J. Shapero has plans for store and apartment building. (See Stores.)

Tenn., Nashville.—E. C. Scruggs has plans by Geo. D. Waller, Nashville, for apartment-house on Ashwood Ave. and Belmont Blvd.;

3 stories; brick; 12 suites; tile floor and hallway; low-pressure steam heat; composition roof; cost about \$25,000; contracts to be let in detail; plans ready about Apr. 15; foundation contract awarded.

Tenn., Nashville.—Kennedy & Stevens have plans by Russell E. Hart, Nashville, for 3-story brick apartment-house on 21st Ave.; 12 suites; composition roof; steam heat; contract let as whole, except mechanical equipment.

Tex., El Paso.—A. J. Brown will erect store and apartment-house. (See Stores.)

Tex., El Paso.—W. C. Teague will erect tenement-house; cost \$3000.

Tex., El Paso.—Mrs. Mildred Patterson will erect apartment-house at Mesa Ave. and California St.; 5 stories; 19 suites; sleeping porches; 72x55 ft.; pressed-brick and concrete, marble and terra-cotta trimmings; automatic elevator; total cost \$50,000.

Tex., Waco.—H. C. Risher has plans by Geo. Burnett, Waco, for 2-story apartment building; cost \$5000.

Va., Norfolk.—Dr. C. Lydon Harrell has plans by Wickham C. Taylor, Norfolk, for apartment building; six 6-room suites, each with 2 baths.

Va., Richmond.—Prudential Realty Corp. will erect brick tenement building on Mulberry St.; cost \$5000.

W. Va., Logan.—William Ghiz will erect two buildings for apartments, etc. (See Stores.)

ASSOCIATION AND FRATERNAL

Ala., Montgomery.—Y. W. C. A. has plans by Frederick Ausfeld, Montgomery, for gymnasium and swimming pool; 37x97 ft.; standard construction; tar and gravel roof; concrete, tile and wood floors; electric lights. (Lately noted.)

Fla., West Palm Beach.—I. O. O. F. plan to erect building; 3 stories; reinforced concrete; 150x150 ft.; cost \$7000.

Ga., Augusta.—A. F. and A. M. will erect masonic temple to replace structure noted damaged by fire.

S. C., Anderson.—Uncle Hiram Lodge No. 68, A. F. & A. M., is having plans prepared by C. Gadsden Sayre, Anderson, to remodel building; hardwood floors; indirect lighting; plaster cornices; gas steam radiators; bids opened in several weeks; cost not determined.

S. C., Woodruff.—Bethel Lodge A. F. & A. M. plans to erect building; 3 stories; first floor for commercial purposes or city offices; second floor offices; third floor lodge rooms.

Va., Hopewell.—Loyal Order of Moose will erect buildings, 50 rooms, gymnasium, bowling alley, swimming-pool, etc.

BANK AND OFFICE

Fla., Jacksonville.—Florida National Bank has plans by Mowbray & Uffinger, 35 Nassau St., New York, to remodel bank building; fireproof; concrete roofing and floor construction; bids opened Apr. 5; cost about \$100,000. Address owner. (Lately noted.)

Fla., Hastings.—Bank of Hastings will erect building at boulevard and Cochrane Ave.; pressed brick veneer; lobby 21.8x14 ft.; vault 7 ft. 4 in.x14.6 ft.

Fla., Tampa.—Mrs. P. F. Kelliber has plans for store and office building. (See Stores.)

Ga., Augusta.—Union Savings Bank will rebuild structure noted damaged by fire at loss of \$60,000.

Ky., Hazel.—Bank of Hazel, H. F. Role, Prest., is reported to erect bank building; completion by June 1.

Ky., Lexington.—Mrs. W. O. Bullock, David and Woolfolk Barrow are reported to erect office building.

La., Natchitoches.—J. H. Williams has plans for store, office and opera-house building. (See Theaters.)

Miss., Baldwin.—Bank of Baldwin, L. C. Prather interested, will erect building to replace burned structure; 28x75 ft.; brick; Carey roofing; wood and tile floors; electric

lighting; heating not decided; cost \$5000. (See Machinery Wanted—Heater.)

Mo., Alton.—E. S. Boyd will erect bank building; 40x80 ft.; 2 stories; brick; metal roof; concrete floors.

N. C., Bridgeton.—T. W. Holton and Dr. B. B. Smith are reported to erect brick bank building.

N. C., Fayetteville.—Stein Bros. will erect building for offices, etc. (See Stores.)

Okla., Pocomet.—Pocomet State Bank has plans by L. P. Larsen, Chickasha, Okla., for bank building; 25x50 ft.; brick; stone; granite; marble; tar and gravel roofing; metal ceiling; maple flooring; cost \$5000.

Okla., Tulsa.—Dr. Walter E. Wright has plans by D. Eichenfeld, Tulsa, to erect office and laboratory building; 40x80 ft.; 2 stories and basement; reinforced concrete; heating not decided; no lighting plant; cost \$20,000; bids opened Feb. 25.

S. C., Anderson.—J. H. Anderson and M. M. Mattison have plans by Casey & Fant, Anderson, for office building; 50x100 ft.; 2 stories; ordinary construction; tin roof; steam heat; electric lights; cost \$15,000; terra-cotta front; tile corridors; marble base; vacuum cleaner; bids open May 1. (Lately noted.)

S. C., Woodruff.—Bethel Lodge A. F. & A. M. plans to erect building with offices on second floor. (See Assn. and Frat.)

W. Va., Logan.—William Ghiz will erect two buildings for offices, etc. (See Stores.)

Tenn., Chattanooga.—Board of Water Commrs. will erect building. (See City and County.)

CHURCHES

Ala., Gadsden.—First Baptist Church, Rev. D. I. Purser, pastor, plans to erect building.

Ala., Gadsden.—First Methodist Church will erect \$20,000 Sunday-school annex. Address The Pastor.

Ark., Heber Springs.—Baptist church will erect brick building. Address The Pastor.

Ark., Corning.—Methodist church will erect building to replace structure lately noted damaged by fire at a loss of \$10,000; Rev. A. F. Skinner, Pastor.

Ark., Forrest City.—Methodist church has plans by W. C. Lester, Memphis, Tenn., for building; seating capacity 700; brick construction; 75x125 ft.; cost \$20,000.

Ark., Walnut Ridge.—Presbyterian church has plans by John P. Almond, 1107 State Bank Bldg., Little Rock, for building; 40x67 ft.; tropical built-up roofing; hot-air heat, \$300; electric lights, \$100; bids opened about Apr. 7. Address Archt.

Fla., Marianna.—First Baptist Church is reported to erect \$40,000 building to replace structure noted damaged by fire. Address The Pastor.

Fla., Miami.—First Church of Christ, Scientist, will erect building; 50x100 ft. Address The Reader.

Fla., Miami.—Second Baptist Church will erect building. Address The Pastor.

Fla., Miami.—Christian Congregation will erect \$40,000 building. Address The Pastor.

Fla., Miami.—First Baptist congregation will erect church building. Address The Pastor.

Fla., Tavares.—Methodist church is reported to erect building. Address The Pastor.

Ga., Augusta.—St. Paul P. E. Church will rebuild structure noted damaged by fire; duplicate of burned building. Address the Rector.

Ga., Thomasville.—Mrs. J. H. Wade, Cleveland, O., will erect Christian Science Church.

Ky., Paris.—Paris Presbyterian Church will not erect building as lately reported.

La., Baton Rouge.—St. Joseph Catholic congregation will expend \$14,000 to remodel building; Dibol & Owens, Archts., New Orleans, La.

La., New Orleans.—Grace P. E. Church, Rev. A. R. Edbrooke, rector, will erect building; plans prepared.

La., Thibodaux.—Catholic church, Rev. A. M. Barbier, Pastor, will rebuild Brothers' residence lately noted damaged by fire; 42x30 ft.; 2 stories; mission style; wood; slate or tile roof; city electric lights; cost \$4000; Jos. Robichaux, Archt., Thibodaux.

Md., Baltimore.—St. Bernard's Catholic Church, Gorsuch Ave., is having plans prepared by Geo. R. Callis, 53 Knickerbocker Bldg., Baltimore, for church and parish-house; church building proper 60x130 ft.; English style; seating capacity, 650; auditorium and basement to seat 500; granite stone trimmings; parish-house 25x62 ft.; granite dressed stone trimmings; total cost, \$125,000.

Mo., Bonne Terre.—Methodist church has plans by John Gaisford, Memphis, Tenn., for \$30,000 building; 16 Sunday-school rooms and auditorium; 72x76 ft.

Md., Hamilton.—St. Dominic's Catholic Church, Rev. John Manley, Pastor, has plans by John K. Stack, 12 E. Lexington St., Baltimore, for rectory; 2½ stories; brick and stone; slate roof; joist floor construction; hot-water heat; electric lights; cost about \$12,000; contractors estimating are L. J. Brown, Park Heights Ave., near Belvidere Ave.; C. C. Watts, 407 E. 25th St.; L. J. Schoenlein & Son, 2217 E. Baltimore St., and Geo. Bunnecke & Son, 305 St. Paul St., all of Baltimore.

Md., Mt. Washington.—Church of Sacred Heart has plans by Baldwin & Pennington, Professional Bldg., Baltimore, for building; cost \$30,000; contractors estimating are Jas. J. O'Connor, 427 E. Lexington St.; Monnier & Sorrell, 1711 McCulloch St.; Willard E. Harn Co., 213 N. Calvert St.; Edward Brady & Son, 1113 Cathedral St.; all of Baltimore. (Previously noted.)

Miss., Belzoni.—First Methodist Episcopal Church South will erect lately-noted building; 70x103 ft.; brick; slate roof; hardwood floors; cost \$12,000; steam heat about \$1200; construction begins about June 1. Address Thomas M. Brownlee. (See Machinery Wanted—Heating; Roofing; Art Glass.)

Miss., West Point.—Baptist church will enlarge building; cost \$15,000. Address The Pastor.

Mo., Joplin.—United Hebrew Congregation, Rev. Joseph Leisel, rabbi, will erect synagogue, Sabbath-school and social center; brick or cement block construction; probably 50x80 ft.; shingle roof; wood floors; gas heat; electric light; cost \$30,000; construction probably begins in summer; architect not selected.

Mo., St. Louis.—St. Louis Baptist Mission Board opens bids about April 1 to erect church; 40x80 ft.; brick; slate roof; wood floors; electric lighting; heating not decided; cost \$5000; L. B. Pendleton, Archt., St. Louis. (Lately noted.)

Okla., Crescent.—Christian congregation plans to erect building. Address The Pastor.

S. C., Ellmore.—Rev. S. N. Danner receives bids until April 5 to erect Ellmore Methodist church building; drawings and specifications may be seen at office of Rev. R. X. Danner, Ellmore, and office of Urquhart & Johnson, Archts., Palmetto Bldg., Columbia, S. C.

S. C., Greenville.—Palmer Memorial Presbyterian church is having plans prepared by C. Gadsden Sayre, Anderson, S. C., for building; colonial style; brick; stone trimmings; indirect lighting; art glass; mechanical heating and ventilating; auditorium, 50x50 ft.; 2-story Sunday-school department connected by rolling partitions; cost undetermined; W. A. Hudson, Chrmn.; bids opened between Apr. 24 and 30.

Tenn., Erwin.—Methodist Episcopal Church South, J. M. Ferguson, Chrmn. of Comm., will erect building; 50x65 ft.; metal or slate roof; hot-air heat; electric light; date of opening bids, etc., not determined. (Lately noted.)

Tenn., Franklin.—Methodist Episcopal Church South, W. A. Roberts, Chrmn. building committee, will erect brick Sunday-school addition; ordinary construction; slate roof; low-pressure steam heat; gas and electric lights; cost \$15,000; bids as whole open April 1; C. K. Colley, Archt., Nashville.

Tex., Fort Worth.—Mulkey Memorial Methodist Church, Rev. Mr. Hotchkiss, pastor, will erect parsonage; frame or brick veneer; cost \$5000.

Tex., Tenaha.—First Baptist Church opens bids about April 15 to erect building; 50x60 ft.; ordinary construction; wood shingle roof; cost \$5000; T. J. and J. O. Galbraith, Archts., Dallas and Hillsboro, Tex., who may be addressed at Slaughter Bldg., Dallas.

Va., Hopewell.—First Presbyterian church, Rev. G. A. Wilson, Jr., Pastor, will erect building.

W. Va., Moundsville.—St. Francis Xavier Catholic Church selected Menor & Sweetser, Huntington, W. Va., to prepare plans for building; light buff brick exterior; limestone and terra-cotta trimmings; also erect rectory.

Va., Winchester.—First Presbyterian Church is reported to erect building; cost \$100,000.

CITY AND COUNTY

Fla., Lake City.—City Hall.—City, G. A. Buie, Chrmn. Board Public Works, sold \$50,000 bonds for refunding debt and erecting city hall.

Fla., Orlando.—Jail.—Orange county is having plans prepared by L. Percival Sutton, Orlando, for jail; cost not to exceed \$10,000.

Ga., Augusta.—Offices.—City will have plans prepared by Nisbet Wingfield, City Engineer, to remodel old postoffice building for offices; cost \$10,000.

Ga., Douglas.—City Hall.—City has plans by Empire Construction Co. for city hall; brick; cost \$5000; contract let April 3.

Ga., Savannah.—Auditorium.—City opens bids Apr. 12 to erect auditorium; 138x190 ft.; fireproof; slate or tile and sing roof; several vault lights, ash lift and sidewalk doors; passenger elevator, dumbwaiter and floor passenger elevator. Henrik Wallin, Archt., 23 lift; cost \$110,000. Hendrik Wallin, Archt., 23 lift; cost \$110,000. Hendrik Wallin, Archt., 23 lift; cost \$110,000. Hendrik Wallin, Archt., 23 lift; cost \$110,000.

La., New Orleans.—Engine-house.—City will erect engine-house on St. Roach Ave.; 2 stories; brick and stucco; slate and composition roofing; cost \$18,000; E. A. Christy, Archt., Room 25, City Hall. Address Commr. of Public Finance. (Lately noted.)

N. C., Greensboro.—Library.—City will erect Carnegie Colored Library on E. Washington St. Address The Mayor.

S. C., Woodruff.—City Hall.—Bethel Lodge A. F. & A. M. plans to erect building with possibly city hall and city offices on first floor. (See Assn. and Frat.)

Tenn., Chattanooga.—Offices.—Board of Water Commrs. accepted plans for 3-story office building on N. Graham St.; pressed brick.

Tex., Houston.—Gymnasium.—City Secretary receives bids until Apr. 10 to construct gymnasium; blank forms, etc., from Maurice J. Sullivan, City Archt., Houston.

Tex., West.—City Hall.—City will vote on bonds to erect city hall. Address The Mayor.

Tex., Wichita Falls.—Jail.—City will erect jail; brick; cost \$10,000 to \$12,000. Address The Mayor.

Va., Norfolk.—Stable.—Board of Control has plans by B. F. Mitchell, Norfolk, for stable for Norfolk Light Artillery Blues; bids opened Mar. 30 (extended date); plans and specifications at architect's office; 80x53 ft., with L. 20x20 ft.; 2 stories; brick and frame; tar and gravel roof; concrete and wood floors; electric lights; contractors estimating are J. H. Pierce & Son, Seaford, S. D. Brown, W. E. Atkinson, E. C. Ford, W. T. Gregory, J. M. Echols, A. F. Smith, Jesse Johnson, C. E. Dunnivant Contracting Co., Nash-Jones Co.; all of Norfolk.

COURTHOUSES

Ark., Batesville.—Custodian of Postoffice receives bids until April 8 to repair courthouse and postoffice.

Ga., Alamo.—Wheeler county is having plans prepared by E. C. Hosford & Co., Eastman, Ga., for courthouse to replace burned structure.

Ma., Bethany.—Harrison county, L. M. Brown, Clerk, contemplates erecting courthouse; cost \$75,000 to \$100,000.

Mo., Ozark.—City defeated \$50,000 bonds to erect courthouse. (Previously noted.)

Tex., Lipscomb.—Lipscomb county, W. H. Seawell, Judge, opens bids Apr. 10 to erect courthouse; plans and specifications at office of Judge Seawell.

DWELLINGS

Ala., Birmingham.—Dr. D. B. Sibley will erect 1-story brick-tile residence; cost \$5000.

Ala., Gadsden.—W. P. Lay will erect 9 dwellings on Terminal Ave. and 1st Ave.; cost \$10,000.

Ala., Piedmont.—Coosa Co. will erect six 2-room bungalows for employees.

Ark., Corning.—Dr. A. D. McKinney will erect residence to replace burned structure. (Lately noted damaged by fire.)

Ark., Corning.—S. P. Lindsey will erect residence to replace burned structure.

Ark., Forrest City.—C. W. Norton has plans by W. C. Lester, Memphis, Tenn., for \$5000 residence.

Ark., Little Rock.—B. L. Uimer will erect 2 bungalows; cost \$3000.

Ark., Madison.—W. T. Hudson and A. J. Crowley, both of Memphis, Tenn., will erect number of tenant-houses on Lady Polka Farm, install sawmill, etc.; cost several thousand dollars.

D. C., Washington.—A. C. Moses, Rittenhouse near 23d St., will erect ten 2-story brick dwellings at 403-09 Rock Creek Church Rd. and 411-21 Quincy St.; cost \$3500.

D. C., Washington.—Harry K. Boss, 714 14th St. N. W., has plans by J. Albert Groot,

4408 Kansas Ave. N. W., Washington, for six 2-story frame dwellings; cost \$36,000; construction by owner.

D. C., Washington.—Harry A. Kite, 1333 G St. N. W., has plans by Geo. P. Santmyers, 216 Kenos Bldg., Washington, for six 2-story brick dwellings at 2349-51 Sherman Ave. and 2346-52 9th St. N. W.; cost \$11,000.

D. C., Washington.—J. P. Jameson has plans by E. N. Hamilton, 502 Park Rd. N. W., Washington, for 2-story frame dwelling; cost \$3500.

D. C., Washington.—M. E. Porter has plans by E. N. Hamilton, 502 Park Rd. N. W., for 2-story frame dwelling; cost \$3250.

D. C., Washington.—Rosemont Development Co., 312-13 Evans Bldg., will erect number of dwellings in Rosemont.

D. C., Washington.—William Murphy has plans by J. B. Davis Palmer, 13 Warder Bldg., Washington, for 2-story brick dwelling; cost \$6000; construction by owner.

D. C., Washington.—W. C. & A. N. Miller have plans by B. F. Meyers, 723 Bond Bldg., Washington, for seven 2-story brick dwellings; cost \$21,000; construction by owner.

Fla., Daytona.—H. H. Windsor of Popular Mechanics, Chicago, is reported to erect \$100,000 residence; temporary address, Princess Isseena Hotel, Seabreeze, Fla.

Fla., Miami.—Frederic H. Rand, Jr., will erect 6 residence in Miramar; native stone, brick, and stone and concrete; cost about \$5000.

Fla., Miami.—Brigham Realty Company is having plans prepared by A. E. Lewis, Miami, for three bungalows; hydro-stone; cost \$3000 each.

Fla., Miami.—Briggs & Wall will erect residence.

Fla., Miami.—C. M. Brown will erect residence.

Fla., Miami.—Mrs. Evelyn De Weese will erect dwelling.

Fla., Pass-a-Grille.—Bert L. Burritt, Daytona Beach, Fla., will erect residence.

Fla., St. Petersburg.—Phillip Braender, Chicago, will erect residence.

Fla., Tampa.—LeRoy Cotter will erect bungalow-type residence.

Fla., Tampa.—Amos L. Harris will erect California-type bungalow; completion by May 15.

Fla., Tarpon Springs.—C. E. Davis will erect five 4 to 6-room bungalows.

Ga., Atlanta.—H. B. Schmidt will erect brick-veneer dwelling; day labor; cost \$3250.

Ga., Atlanta.—H. W. Stevenson will erect \$3500 dwelling; day labor.

Ga., Atlanta.—F. L. Irwin will erect 2-story frame dwelling at 327 Lee St.; cost \$5000; day labor.

Ga., Atlanta.—H. W. Beers will erect 2-story brick veneer residence; cost \$6500.

Ga., Atlanta.—J. P. Daniel will erect 1-story brick veneer dwelling; cost \$3750; day labor.

Ga., Savannah.—Alvin and Leon Schwab will erect 2-story frame residence; 28x43 ft.; metal roof; hardwood floors; electric light; cost \$4500; also contemplate erecting 3 additional dwellings.

Ky., Louisville.—C. A. Cravens will erect brick dwelling; cost \$5000.

Ky., Louisville.—Howard Lea will erect \$4000 brick dwelling at 323 Birchwood St.

Ky., Louisville.—C. A. Cravens will erect brick dwelling; cost \$5000.

Ky., Louisville.—Howard Lea will erect brick dwelling; cost \$4000.

Ky., Louisville.—William Sales will erect 2 frame dwellings; cost about \$4000.

Ky., Louisville.—G. J. Lampton & Son, 1362 Hemlock St., will erect 8 dwellings at 431-45 S. 22d St.; 14x50 ft.; metal roof; cement sidewalk; cost \$700 each; construction by owner.

Ky., Louisville.—C. E. Proctor will erect brick dwelling; cost \$3000.

Ky., Louisville.—L. Jacobson will erect 17 frame dwellings; cost \$1500 each.

Ky., Seco.—Southeast Coal Co. will erect 30 additional miners' houses; construction begins at once. Address H. Laviers, Mgr.

La., De Ridder.—A. J. Armstrong, Shreveport, La., is receiving bids to erect 2-story 9-room residence; cost about \$6000.

La., New Orleans.—Ernest W. Jones will erect frame residence; cost \$3500.

La., New Orleans.—R. B. Roessle will erect frame residence; cost \$2500.

La., New Orleans.—Jessie Spillman will erect 2-story frame residence; cost \$7000.

Md., Baltimore.—Chas. M. Wartman will

erect nine 2-story dwellings at Monroe St. and Clifton Ave.

Md., Baltimore.—Geo. R. Morris, Title Bldg., will erect two 2-story two 2½-story and one 1½-story dwelling; cost \$16,000.

Md., Baltimore.—John J. Carlin, 215 St. Paul St., has plans by Stanislaus Russell, 2900 Clifton Ave., Baltimore, for 37 dwellings on Reisterstown Rd.; 2½ stories; brick; 22x37 ft.; ordinary construction; tile and sing roof; steam heat; cost \$100,000; construction, by owner, begins Apr. 1. Address owner. (Lately noted to erect 150 dwellings on this site.)

Md., Baltimore.—Abell Building Co., 312 Equitable Bldg., has plans by Stanislaus Russell, 2900 Clifton Ave., Baltimore, for 2 duplex dwellings on Brooks Lane near Eutaw Pl.; 41x71 ft.; ordinary brick; sing roof; steam heat; cost \$9000; construction begins Apr. 1 by owner, who may be addressed.

Md., Baltimore.—C. W. Galloway, Gen. Mgr. Baltimore & Ohio R. R., has plans by Clyde N. Friz, Munsey Bldg., for residence on Edmondson Ave.; 30x70 ft.; stone and frame; slate roof; ordinary floors; hot-water heat; cost \$13,000; contractors estimating are John F. Kunkel, 29 S. Linwood Ave.; Gladfelter & Chambers, 729 Roland Ave.; A. F. West, 15 E. Fayette St.; J. Henry Smith, 1426 Light St.; Cowan Building Co., 106 W. Madison St.; Price Concrete Construction Co., 225 St. Paul St., all of Baltimore. (Lately noted.)

Md., Baltimore.—Edward Storck has plans by Jacob F. Gerwig, 1028 N. Fulton Ave., for eleven 3-story dwellings at 3121-41 Guilford Ave.

Md., Roland Park.—F. R. B. Williams has plans by Walter M. Gleake, 65 Gunther Bldg., Baltimore, to remodel dwelling at Cold Spring lane and Hawthorn rd. and erecting addition.

Md., Bear Creek.—Benj. Friedenwald is having plans prepared by C. M. Anderson, 324 N. Charles St., Baltimore, Md., for cottage; contractors estimating are Thomas P. Johns, 405 McCulloch St.; Consolidated Engineering Co., Calvert Bldg.; both of Baltimore, and John T. Fisher.

Miss., Indianola.—Chas. B. Klingman has plans by Regan & Waller, Memphis, Tenn., for residence; cost \$6500.

Miss., Pickens.—Edward Atkinson is having plans prepared for residence; 2 stories; ordinary frame construction; asphalt shingle roof; sanitary plumbing; electric lighting; construction begins in Apr.; Emmett J. Hull, Archt., Daniel Bldg., Jackson, Miss.

Mo., St. Louis.—James Mulligan will erect bungalow.

Mo., St. Louis.—Sam Kopler Realty & Bldg. Co. will erect four 2-story dwellings; cost \$20,000; also three 2-story tenements; cost \$18,000.

N. C., Asheville.—R. P. Walker will erect 7-room \$3000 dwelling.

N. C., Charlotte.—C. H. Gover has plans by Willard G. Rogers, Trust Bldg., Charlotte, for dwelling at Myers Park; frame; slate or tile roof; wood floors; hot-water heat; electric lighting; cost \$10,000; date of opening bids not set; construction to begin Apr. 15. Address Architect.

N. C., Charlotte.—J. D. Stroupe will erect \$2000 dwelling on Seige Ave. and \$2500 dwelling on Fairview Ave.; construction by owner.

N. C., Charlotte.—L. E. Green of Patterson & Faller purchased site at Myers Park and is reported to erect 10,000 dwelling.

N. C., Monroe.—Allen Heath has plans by Wheeler & Stern Co., Charlotte, N. C., for dwelling; frame; slate roof.

N. C., Monroe.—W. C. Stack has plans by Wheeler and Stern Co., Charlotte, N. C., for residence; frame; shingle roof; stone foundation.

N. C., Oriental.—W. J. Smith contemplates erecting dwelling; 10 or 12 rooms; brick; private water conveniences. (See Machinery Wanted—Building Materials.)

Okla., Pocomasset.—L. P. Larsen, Chickasha, Okla., prepared plans for \$2900 residence.

Okla., Tulsa.—Blair Bros. will erect dwelling on S. Boulder St.; 2 stories; stucco; cost \$8000.

Okla., Tulsa.—G. B. Stotts will erect frame residence; cost \$4000.

Okla., Tulsa.—Hannah E. Mowbray will erect \$3000 frame residence.

Okla., Tulsa.—H. W. Black will erect frame dwelling; cost \$4500; also \$500 garage.

Okla., Tulsa.—J. E. Rodgers will erect \$3000 frame residence.

Okla., Tulsa.—C. W. Grimes will erect dwelling on 19th St.; 2 stories; brick; cost \$7000.

Okla., Tulsa.—C. L. Holland will erect frame dwelling on S. Detroit St.; 2 stories; cost \$3000.

Okla., Tulsa.—Jessie Finston will erect dwelling; 2 stories; stucco; cost \$8000.

Okla., Tulsa.—M. M. Grovis will remodel dwelling and garage; cost \$6000.

Okla., Wewoka.—F. Kirkland will erect residence.

Okla., Wewoka.—L. P. Winn will erect residence.

S. C., Charleston.—McCrary Bros. & Cheves will erect 2 dwellings; cost \$5000.

S. C., Charleston.—Dr. H. A. Smathers will erect dwelling; cost \$4000.

S. C., Georgetown.—Mrs. Alfred G. Vanderbilt, Arcadia, Georgetown, is reported to erect residence; cost \$100,000.

S. C., Great Falls.—J. B. Duke, Prest., Southern Power Co., New York, has not definitely decided to erect dwelling lately noted.

S. C., Laurens.—W. H. McPhail will erect \$5000 brick dwelling.

S. C., Laurens.—R. F. Fleming plans to erect \$3000 dwelling.

Tenn., Buntyn.—Dr. W. J. Hunt has plans by Regan & Waller, Memphis, for stucco bungalow; cost \$4000.

Tenn., Chattanooga.—P. P. Gleaves will erect 3 frame residences; cost \$3500.

Tenn., Memphis.—Charles L. Tucker will erect 1-story 7-room frame and stucco residence; cost \$3000.

Tenn., Memphis.—Fred Long will erect 1-story 7-room frame and stucco residence; cost \$3000.

Tenn., Memphis.—Clinton Lumber Co. will erect three bungalows; cost \$5000.

Tenn., Memphis.—W. C. Chandler will erect residence at Woodlawn and Jackson Sts.; cost \$3250; also preparing to construct 4 additional dwellings to cost \$3000 each.

Tenn., Memphis.—W. F. Gordon plans to erect several dwellings.

Tenn., Memphis.—J. C. Lutz is reported having plans by Regan & Waller, Memphis, for brick-veneer and stucco bungalow; cost \$6500.

Tenn., Memphis.—T. W. Ham is reported having plans prepared by Regan & Waller, Memphis, for brick-veneer bungalow; cost \$4000.

Tenn., Memphis.—W. T. Armstrong is having plans prepared by Mahon & Broadwell, Memphis, for residence; English half timber and brick for first half story; cost \$12,000.

Tenn., Nashville.—Dr. E. B. Cayce, 301 Hitchcock Bldg., is receiving bids in detail on stucco and cut-stone residence.

Tenn., Nashville.—Mrs. John Hill Eiken will erect frame bungalow in Sunset Park; Marr & Holman, Archts., Nashville; detail bids received by owner.

Tenn., Nashville.—W. B. Baird will erect brick and stucco veneered dwelling; cost \$5000.

Tex., Corsicana.—A. L. Allison has plans by H. O. Blanding for residence; 50x60 ft.; face and common brick construction; tin-tile roofing; oak and pine floors; city electric lights; heating not decided; cost \$10,000. (Lately noted.)

Tex., El Paso.—Mayfield Bldg. and Improvement Co. will erect 2 bungalows; cost \$8800.

Tex., El Paso.—Hawkins Improvement Co. will erect two 5-room bungalows in Alta Vista.

Tex., Ft. Worth.—Scenery Hill Land & Building Co. will erect six 1-story 4-room frame residences; cost \$4000; construction by owner.

Tex., Houston.—Nat Ewing will erect 7-room residence; cost \$4000.

Tex., San Antonio.—B. D. Harrigan, 504 Moore Bldg., will erect residence at Perry Court and Country Club Pl.; ordinary construction; 30x60 ft.; shingle roof; hot-air heat; electric lights; cost \$4200; plans and construction by owner; will also erect about \$250,000 worth of additional residences. (See Machinery Wanted—Building Materials; Tile Heating Plant; Electric Fixtures.)

Tex., Vernon.—J. P. King will let contract in about 10 days to O. A. Swinburn, Vernon, to erect residence; 9 rooms; brick; clay-tile roof; oak floors; cost \$8000; R. H. Stuckey, Archt., Chillicothe, Tex.

Va., Lynchburg.—Mrs. Jessie E. Martin will erect dwelling; frame; slate roof; cost \$3000.

Va., Richmond.—O. D. Brinser will erect two 2-story brick dwellings; cost \$6000.

Va., Richmond.—J. B. Swartwout will erect 2-story frame stucco dwelling; cost \$4400.

Va., Richmond.—E. C. Woodward will erect 4 dwellings; 25x36 ft.; ordinary construction; tin roof; cost \$5000. (Lately noted.)

Va., Richmond.—Atlanta Construction Co. will erect two 2-story brick dwellings on Leigh St.; cost \$7500.

Va., Richmond.—P. J. Beattie will erect 2-story dwelling on Blvd.; cost \$7650.

Va., Richmond.—C. H. Thompson, Rio Vista, Va., will erect residence to replace structure lately noted damaged by fire; about 30x40 ft.; brick; slate roof; steam or hot-water heat; electric lights; cost \$6000; construction by owner.

Va., Richmond.—F. W. Brauer will erect dwelling on Kensington Ave.; cost \$9000.

Va., Richmond.—Mrs. Bessie M. Catts will erect dwelling on Grace St.; cost \$5800.

Va., Roanoke.—H. B. Stone will erect dwelling; 2 stories; brick casing; cost \$3000.

GOVERNMENT AND STATE

Ark., Batesville.—Postoffice.—Custodian of postoffice receives bids until Apr. 8 to repair postoffice and courthouse.

Ca., Norfolk.—Lavatories.—Bureau of Yards and Docks, Navy Department, Washington, D. C., receives bids until Apr. 29 to construct 1-story stucco terra-cotta tile toilet building, with plumbing, heating and lighting fixtures, at Navy-Yard; plans and specifications at office of Bureau or Commandant of Navy Yard; William M. Smith, Acting Chief of Bureau.

N. C., Wilmington.—Custom-house.—Treasury Dept., James H. Wetmore, Acting Supervising Archt., Washington, receives bids until Apr. 6 (extended date) to construct custom-house, appraisers' stores and court-house; also, same date, for mechanical equipment (except elevators) and lighting fixtures; plans and specifications from custodian at site and Mr. Wetmore as above; Wells Bros. Co. of New York, Riggs Bldg., Washington, D. C., are among contractors estimating. (Noted in February.)

Tex., Isabel.—Operators' Quarters.—Bureau of Yards and Docks, Navy Dept., Washington, receives bids until Apr. 8 to erect one wood-frame quarters at Naval Radio Station; brick or concrete piers; shingle roof; drop siding for exterior finish; plastered interior walls and ceilings; 25 ft. 4 in. x 36 ft. 10 in.; 13 ft. 3 in. high; plans and specifications on application to bureau; F. R. Harris, Ch. of Bureau.

HOSPITALS, SANITARIUMS, ETC.

Fla., Tallahassee.—King's Daughters, Miss Mary D. Lewis, Pres., will erect \$10,000 hospital in Southwest division.

Miss., Clarksdale.—Mrs. M. L. Wingfield and others are reported interested in erecting \$50,000 hospital building.

Mo., Chillicothe.—Drs. A. J. Simpson and H. M. Grace have plans by R. Warren Roberts, Chillicothe, for hospital; brick and fireproof; electric-lighting plant; electric elevator; construction begins in spring; other details not decided. Address owners.

N. C., Asheville.—Dr. W. E. Meacham will erect addition to Ottari Hospital; 18 rooms; gypsum block construction; fireproof; concrete foundation; 2 to 3 stories; 40x120 ft.; fireproof composition roofing; hardwood on felt floor construction; steam heat; cost \$20,000; porch for each room; Smith & Carlier, Archts., Asheville; construction by owner.

S. C., Chester.—Dr. S. W. Pryor will erect hospital building to replace structure reported burned; 25 beds; fireproof; cost \$40,000. Address Pryor's Hospital.

N. C., Wilmington.—James Walker Memorial Hospital has plans by Kenneth M. Murchison, 101 Park Ave., New York, for building for women's ward; 32.6x38 ft.; porches, 12 ft., on each end; two stories and basement; brick walls and frame construction; slate roof; wood floors with tile in bathrooms; single pipe gravity return system of heating; cost \$20,000; bids in, but contract not awarded. (Lately noted.)

Tenn., Memphis.—Methodist Episcopal church South is having plans prepared by John Gaisford, Memphis, to remodel Malloy residence for hospital; will provide private rooms; install elevator; nurses' quarters, etc.; cost \$40,000.

Va., Clifton Forge.—Chesapeake & Ohio Ry., F. I. Cabell, Chief Engr., Richmond, is reported to erect hospital to replace present structure; construction begins April 1.

Va., Hopewell.—Emergency Hospital will erect 5 additional rooms.

Va., Richmond.—American Locomotive Co. will erect emergency hospital; 2 stories; brick; cost \$6500.

Va., Williamsburg.—Dr. C. W. Mercer, Dr. T. B. Leonard and others have plans for community hospital.

HOTELS

Fla., Daytona.—Daytona Beach Hotel is reported to erect 50 additional rooms each with bath.

Fla., Daytona Beach.—Mr. Ayres, owner of Daytona Beach Hotel, will erect addition; 50 rooms, each with bath.

Fla., Fort Myers.—Dr. M. O. Terry, Mamaroneck, N. Y., is having plans prepared by F. J. Kennard, Tampa, to remodel Hotel Royal Palm and erect addition of 50 to 60 rooms with private bath; install electric elevator; enlarge present dining-room and enclose in plate-glass; considering installation of refrigerating plant; will equip with new furniture, carpet, hangings, etc.; cost \$50,000 to \$60,000.

Fla., Fort Pierce.—C. Leon Faber is having plans prepared to remodel Atlantic Hotel and for store and hotel building. (See Stores.)

Fla., Palm Beach.—H. W. Wesson, Revere Beach, Mass., is reported to erect hotel building.

Fla., Ft. Meade.—W. M. Taylor, Lakeland, Fla., will remodel hotel.

Ky., Berry.—Wakula Hotel Co. will erect hotel, etc.

La., New Orleans.—Albert Aschaffenberg is reported to erect apartment-house or family hotel at St. Charles and Julia Sts.

Miss., Pass Christian.—Jahneke Bros., A. Aschaffenberg, Dr. Geo. A. MacDairmid and John Legler, all of New Orleans, are promoting erection of hotel; about 100 rooms; construction begins by June 1.

Miss., Pass Christian.—J. M. McGlathery & Sons will erect hotel; brick.

Mo., Chillicothe.—New Leeper Hotel will soon let contract to erect \$20,000 addition, enlarge dining-room, construct kitchen, etc.; Warren Roberts, Archt., Chillicothe. Address Clarke-Carrier Hotel Co.

N. C., Blowing Rock.—Blowing Rock Hotel is being organized with \$25,000 capital; will acquire Blowing Rock Hotel and improve same; Mrs. Emma Taylor, Hickory, N. C., is reported interested.

N. C., Hendersonville.—L. J. Cambron is reported interested in erection of \$150,000 hotel; reported having plans prepared by James M. McMichael, Charlotte, N. C.

Okla., Cleveland.—A. L. Duell will erect hotel to replace wrecked structure.

S. C., Anderson.—C. C. Hindman and W. K. Hudgens of Pelzer, S. C., are reported to improve Hotel Williamston; provide 4 storerooms, 55x22 ft. each and hotel lobby on first floor; guestrooms on upper floors; Casey & Fant, Archts., Anderson.

S. C., Camden.—Mrs. K. J. Whistler plans to erect addition to hotel.

Tenn., Knoxville.—Imperial Realty Co. contemplates erecting hotel to replace Hotel Imperial burned at loss of \$150,000; 8 stories and basement; E. C. Richards, Archt., Columbus, O.

Tex., Amarillo.—William Garwood plans to construct hotel.

Tex., El Paso.—W. M. Laughlin will erect hotel; 4 stories; concrete; fireproof; 109 rooms; cost \$50,000.

MISCELLANEOUS

Ala., Pleasant Gap.—Cafe.—M. L. Braswell will erect building to be occupied by Mill Cafe Co.

Fla., Lake City.—Clubhouse.—Women's Club plans to erect clubhouse to cost \$2500 to \$4000.

Ga., Atlanta.—Nurses' Home.—A. W. Farlinger, Farlinger Court, is having plans prepared by C. E. Frazier, Candler Bldg., Atlanta, for nurses' home; 4 stories and basement and roof garden; fireproof; 70x35 ft.; 57 dormitories; 27 baths; accommodations for 150 nurses; roof garden and sun parlor; cost \$50,000; construction begins April 10.

La., Algiers.—Asylum.—Asylum for Destitute Orphan Boys will erect building; Rev. J. L. Sutton in charge of present location, St. Charles Ave., New Orleans, La.

La., Alexandria.—Orphanage.—Alexandria Cathedral is interested in erection of orphanage at Alexandria or Pineville; E. J. Barrett, S. W. W. Whittington and others, Com.

La., Pineville.—See La., Alexandria.

Md., Baltimore.—Clubhouse.—Automobile Club of Maryland receives bids until Apr. 3 to erect clubhouse at Mt. Royal Ave. and Cathedral St.; 3 stories; 53x33 ft.; assembly hall to seat 600; cost \$50,000; Wyatt & Nolting, Archts., Keyser Bldg., Baltimore; contractors

estimating are David M. Andrew Co., Mt. Vernon Ave. and 26th St.; B. F. Bennett Building Co., 123 S. Howard St.; L. L. Chambers, 720 Roland Ave.; Milton C. Davis, 15 E. Fayette St.; Fred Decker & Son, 1209 E. Biddle St.; Willard E. Harn & Co., 213 N. Calvert St.; John Hiltz & Sons Co., 3 Clay St.; Morrow Bros., Fidelity Bldg.; William N. Hilbrand, 112 N. Payson St.; Price Concrete Construction Co., 225 St. Paul St.; Henry S. Rippel, 7 Clay St.; J. Henry Smith, 1426 Light St.; Henry Smith & Sons Co., Light and German Sts.; Charles L. Stockhausen Co., Inc., Marine National Bank Bldg.; Clarence E. Stubbs, Equitable Bldg.; John Waters, 23 E. Center St.; Joseph H. Pentz (Singer-Pentz Co.), 600 Equitable Bldg.; Wm. F. Chew (Thomas B. Stanfield & Co.), 212 Clay St.; Cowan Building Co., 106 W. Madison St.; H. D. Watts Co., German and Calvert Sts.; Arthur F. West, 15 E. Fayette St.; all of Baltimore.

Mo., Kansas City.—Clubhouse.—Rock Hill Tennis Club will erect 1-story frame clubhouse; cost \$6000.

Mo., Kansas City.—Clubhouse.—Shawnee Heights Golf Club plans to erect clubhouse to replace burned structure.

N. C., Fayetteville.—Hall.—Stein Bros. will erect building for hall, etc. (See Stores.)

Okla., Ardmore.—Clubhouse.—Dornick Hills Country Club will expend \$7500 for improvements.

Okla., Tulsa.—Laboratory, etc.—Dr. Walter E. Wright has plans for offices and laboratory building. (See Bank and Office.)

Okla., Tulsa.—Clubhouse.—Tulsa Country Club is having plans prepared by Geo. Winkler, Tulsa, for clubhouse; semi-fireproof; brick; tile roof; porches; orchestra balcony; promenade, 18x58 ft.; driveway through porte cochere; ballroom, dining-room, etc.

RAILWAY STATIONS, SHEDS, ETC.

Ark., Russellville.—St. Louis, Iron Mountain & Southern Rwy., E. A. Hadley, Chief Engr., St. Louis, will erect depot; plans drawn.

Ga., Atlanta.—Southern Ry. Co., W. H. Wells, Ch. Engr., Washington, D. C., is reported to erect passenger station at Brookwood, on Peachtree St.

Ga., Americus.—Central of Georgia Ry., C. K. Lawrence, Ch. Engr., Savannah, will remodel; enlarge waiting-rooms; construct umbrella sheds; construct iron fence; repaint entire structure; cost several thousand dollars.

Ga., Americus.—Seaboard Air Line Ry., W. B. Fawcette, Ch. Engr., Norfolk, Va., will improve passenger station; construct concrete walk and umbrella sheds over it; enlarge waiting-room; construct baggage-room, etc.

La., Leesville.—Kansas City Southern R. R., C. E. Johnston, Ch. Engr., Kansas City, Mo., will erect station; red brick and stucco; ornamental tile roof; 450-ft. concrete curbing in front of building; cost \$15,000 to \$20,000. (Noted in Jan.)

Okla., Henryetta.—St. Louis & San Francisco R. R. Co., V. K. Hendricks, Engr., St. Louis, will erect passenger station; completion by September.

Tenn., Clarksville.—Louisville & Nashville R. R., W. H. Courtenay, Chief Engr., Louisville, Ky., will expend about \$10,000 to improve passenger station.

Tex., San Antonio.—San Antonio Belt & Terminal Ry. Co., holding company for Missouri, Kansas & Texas R. R., L. F. Lonnbladh, Ch. Engr., Dallas, is reported to issue \$1,750,000 notes to erect passenger and freight terminals; no contract let, but agreement reported with contractor to do work on basis of cost of labor, materials, etc., plus 10 per cent; cost of freight and passenger buildings, tracks, yards, sidings and all other terminal appurtenances, \$900,000. (Previously noted.)

SCHOOLS

Ala., Montgomery.—Board of Control of Masonic Home, Ben M. Jacobs, Chmn., Birmingham, will erect school at Masonic Home and convert present auditorium into dormitory; plans prepared; cost about \$20,000.

Fla., Hallandale.—City will erect school building; construction begins about Apr. 1. Address The Mayor.

Fla., Jacksonville.—Board of Public Instruction, Duval county, receives bids until April 22 at office of F. A. Hathaway, County Supt., 415 Masonic Temple, to erect brick school at 16th and Franklin Sts.; plans and specifications at office of R. A. Benjamin, Archt., Jacksonville, and Mr. Hathaway as above. (Lately noted.)

Fla., Military Park.—Kentucky Military Institute (permanent address, Lyndon, Ky.), C. W. Fowler, Supt., will rebuild burned structure; about 22x36 ft.; 3 stories; Parlor or similar roofing; plans by Mr. Fowler, who may be addressed at Military Park; date of opening bids undecided; construction begins about September. (Lately noted damaged by fire.)

Fla., New Smyrna.—Board of Public Instruction, Volusia county, rejected all bids to erect school; will have plans revised by A. E. Lewis, Miami, for reinforced concrete fireproof structure heated with steam, to come within \$36,500 available; plans ready in about 30 days. (Lately noted.)

Fla., Stuart.—Trustees accepted plans by F. H. Trimble, Fellsmere, Fla., for school.

Ga., Leslie.—Leslie School Dist is having plans prepared by E. C. Hofsford & Co., Eastman, Ga., for school; brick and frame; classrooms; auditorium; cost \$10,000. (Previously noted.)

Ky., Versailles.—Margaret College will erect \$16,000 addition; J. N. Camden, Louis Marshall, A. C. Hunter and others, committee.

Ky., Providence.—City voted \$15,000 bonds to erect school. Address The Mayor.

La., Colfax.—Grant parish will vote in April on \$10,000 school bonds. Address District School Trustees.

La., Oak Grove.—West Carroll Parish School Board, Dr. W. McG. Dellerhilde, Supt., is having plans prepared by A. J. Armstrong, Shreveport, La., for school; two stories and basement; 12 rooms and auditorium; 72x56 ft.; material to include common brick; yellow pine mill work; steel; composition roofing; pine and concrete flooring; metal cornice; skylight; electric fixtures; probably heating plant; contract let about April 10.

La., Mansfield.—G. O. Houston, Supt. of Public Instruction, receives bids until Apr. 5 to erect high school; 2 stories; 80x140 ft.; ordinary construction; built up asbestos, felt and gravel roof; vacuum steam heat; cost about \$45,000; plans and specifications at office of Edward F. Nield, Archt., Commercial National Bank Bldg., Shreveport, La. (Lately noted.)

La., Montgomery.—Montgomery School Dist. votes Apr. 2 on \$10,000 bonds to erect school. Address Grant Parish School Board, Colfax, La. (Lately noted to have voted these bonds.)

La., Oak Grove.—School Trustees are having plans prepared by A. J. Armstrong, Shreveport, La., for 2-story-and-basement school; cost about \$20,000.

La., Shreveport.—Caddo School Directors, Randall Hunt, Pres., ordered election for Apr. 25 in Dist. No. 1 on \$150,000 bonds for schools.

Md., Frederick County.—Hornblower & Marshall, 1410 8th St. N. W., Washington, D. C., are preparing plans for school building near Dickerson; for joint use of Frederick and Montgomery counties; cost about \$20,000.

Md., Roland Park.—Gilman School for Boys is having plans prepared by E. L. Palmer, Jr., Munsey Bldg., Baltimore, for residence for headmaster; 2½ stories; brick; cost \$15,000.

Md., Halethorpe.—Baltimore Manual Labor School will rebuild structure noted damaged by fire at loss of \$60,000.

Miss., Coldwater.—City has plans by John Galsford, Memphis, Tenn., for school building; brick; two concrete stairways; auditorium; slate roof; cost \$14,000. (Lately noted to vote April 4 on \$15,000 bonds.)

Miss., Drew.—City is having plans prepared by R. B. Spencer, Jackson Miss., for \$14,000 school building; 3 stories; auditorium to seat 400.

Mo., Hume.—Hume Consolidated School Dist. votes April 4 on \$20,000 bonds to erect school building; fireproof; probably steam heat; electric lights; bids opened April or May; construction begins in May. Address John E. Bryant, Pres. Board of Education.

Mo., Mooreville.—City will soon vote on bonds to erect school. Address Board of Education.

Mo., Neosha.—Board of Education, Neosha School Dist., has plans by N. C. Davis, Neosha, for high school.

N. C., Cary.—Wake County Board of Education, Raleigh, is considering erecting \$15,000 dormitory to replace burned structure; two stories; brick.

N. C., Cary.—County Board of Education, Raleigh, N. C., will erect dormitory to replace burned structure; about 20 rooms; ordinary construction; slate roof; cost \$8000; low-pressure steam heat, \$85; architect not

selected; construction begins May 1. (Lately noted under N. C., Raleigh.)

N. C., Reidsville.—School Dist. voted \$20,000 bonds to erect school; J. B. Pipkin, chairman School Commrs. (Previously noted.)

Okla., Ninnekah.—Ninnekah Consolidated School Dist. voted \$5000 bonds to erect addition to school building; tentative plans call for auditorium and two classrooms. Address School Trustees.

S. C., Taylors.—School Dist. No. 9, Greenville county, votes about Apr. 15 on \$7000 bonds to erect school. Address Dist. School Trustees.

S. C., Tigerville.—Tigerville College will rebuild burned dormitory; 30 rooms, dining-room and kitchen; probably brick veneer; hot-air or steam heat; cost \$6000. Address Dr. A. E. Brown, Asheville, N. C. (Lately noted burned.)

Tenn., Bristol.—W. H. Cox, Chmn. High School Commrs., opens bids April 10 to erect high-school building; bids may be submitted for entire building, but cost of heating, ventilating, electrical equipment and plumbing to be shown separately; plans by Thomas S. Brown and Burnett & Loggans, Assoc. Archts., Bristol, call for structure to cost about \$43,000. (Lately noted.)

Tenn., Calhoun.—County will erect school; brick; built-up roof; concrete basement; hot-air or steam heat; electric lights; cost \$500 to \$600; architect not selected. Address R. A. McMurray, Chmn. Building Committee. (Lately noted.)

Tenn., Harrison.—City votes May 6 on \$50,000 school bonds. Address The Mayor.

Tenn., Jacksboro.—Campbell county will expend \$60,000 for grammar schools and \$10,000 for high school. Address County Commrs.

Tenn., Millington.—City has plans by Harker & Cairns, Memphis, Tenn., for community school building; reinforced concrete and brick; 16 rooms and auditorium to seat 100; cost \$30,000.

Tenn., Nashville.—City will rebuild Warner School, noted damaged by fire. Address The Mayor.

Tex., Abilene.—Simmons College opens bids Apr. 6 to erect dormitory; 3 stories; reinforced concrete; brick bearing walls; wood floors over cinder fill; 2-in. stud, metal laths and plaster partitions; steam heat; gas and electric lighting; plumbing system complete, including septic tank; approximate cost, \$40,000; David S. Castle, Archt., 29 Radford Bldg. (Lately noted to open bids Mch. 10.)

Tex., Alice.—Alice Ind. School Dist. will erect school building; about 50x75 ft.; brick; slate roof; wood floors; stoves or hot-air heat; city lighting; cost \$3500; architect not selected. Address J. H. Watts, Alice. (Lately noted.)

Tex., Big Springs.—City will let contract Apr. 4 to erect high school; steam heat; plumbing and electrical work in general; contract; C. H. Page & Bro., Archts., Austin and Houston, Tex. (Lately noted.)

Tex., Cost.—Trustees Cost Common School Dist. are having plans prepared for two-story six-room school building; brick or concrete; \$7000 bonds available.

Tex., Corsicana.—School Board is having plans prepared by O. H. Blanding, Corsicana, and Wiley Clarkson, Fort Worth, for school building in Third ward; 2 stories and basement; brick with stone trimmings; steam heat; cost \$15,000.

Tex., Fort Stockton.—Trustees have plans by Geo. Burnett, Waco, Tex., for 3-story fireproof school; cost \$50,000. (Previously noted.)

Tex., Georgetown.—A. Dee Simpson, Secy. Southwestern University Campaign, receives bids until Apr. 5 to erect reinforced concrete science building; 3 stories and basement; cost \$50,000. (Noted in February.)

Tex., Laredo.—Laredo School Dist. voted \$80,000 school bonds. Address Dist. School Trustees.

Tex., San Antonio.—School Board purchased sites and will erect 12 and 16-room school buildings.

Va., Blacksburg.—City opened bids to erect high school; John F. Barbour & Sons, Roanoke, Va., and Hoback & Hofford, Pulaski, Va., are low bidders; plans by G. R. Ragan, 20 Colonial Bank Bldg., Roanoke, call for 3-story structure 60x100 ft.; ordinary construction; slate roof; steam heat; electric lights; cost \$20,000. (Lately noted.)

Va., Danville.—School Board, J. N. Wylie, Clk., receives bids until Apr. 15 to erect high school; 87x103 ft.; brick; tar and slag roof; maple floors; plans and specifications at office of Pritchett & Henderson, Archt., Dudley Bldg., Danville; Wiley & Wilson.

Heating Engrs., Lynchburg, Va. (Lately noted.)

W. Va., Ronceverte.—Fort Springs School Dist. voted \$30,000 bonds to erect addition to school. Address Dist. School Trustees. (Lately noted.)

W. Va., Matewan.—School Board is having plans prepared by Pedigo & Garry, Bluefield, W. Va., for 2-story brick school; cost \$20,000.

W. Va., Richwood.—Richwood Ind. School Dist. is reported to vote on \$40,000 school bonds. Address Dist. School Trustees.

STORES

Ark., Decatur.—Edmiston & Whitaker will erect business building; concrete construction.

Ark., Nashville.—D. M. Galloway plans to erect brick business building; frontage 50 ft.

Ark., West Memphis.—R. E. Montgomery, Lee Lumber Co., Memphis, Tenn., has contract to erect stores. (See Hotels.)

Fla., Fort Pierce.—C. Leon Faber is having plans prepared by A. E. Lewis, Miami, Fla., for building; first story only to be erected at present; to contain 6 stores; 3 additional stories to be erected later for hotel with 50 guestrooms; reinforced concrete; fire and sound proof; also having plans prepared by same architect to remodel Atlantic Hotel; install fire escapes; hot and cold running water in all rooms; steam heat; private baths for about half of rooms.

Fla., Tampa.—Mrs. P. F. Kellihier has plans by Port & Parslow, Curry Bldg., Tampa, for store and office building; 5½ stories and basement; 35x105 ft.; ordinary construction; composition roof; wood floors; steam heat; electric lights; two electric elevators; cost \$40,000; will take private bids in about 60 days; address Archts. (See Machinery Wanted—Refrigerating.)

Ga., Atlanta.—D. M. Deitch will expend \$12,000 to \$14,000 to remodel store at Marietta and Forsyth Sts.

Ga., Macon.—Mrs. Jack Lamar and Mrs. Warren Roberts are reported to erect business building on Cherry St.

Ga., Macon.—Union Dry Goods Co., W. J. Juhan, Prest., will erect business building.

Ky., Hazard.—D. W. Fulp will erect business building; 4 stories; brick; concrete foundation; select face brick; steel girders; plate-glass fronts; sanitary plumbing; electric wiring; metal ceilings; composition roof; hardwood finish; T. T. Carter, Archt., Bluefield, W. Va.

Ky., Louisville.—W. B. Miller will expend \$4000 to repair 7 buildings.

La., Natchitoches.—J. H. Williams has plans for store, office and opera-house building. (See Theaters.)

La., New Orleans.—Henry Gumble will erect 2-story store building.

La., New Orleans.—S. Fertel will probably erect stores on S. Rampart St.

Mo., Kansas City.—W. J. Clark will erect 2-story brick store and flat building; cost \$12,000.

Mo., Kansas City.—G. W. Ellsworth will erect 2-story store and flat building at 3827-31 The Paseo; cost \$10,000.

Mo., St. Louis.—Louis A. Wirth will erect 2-story store and dwelling at 5308 Florissant St.; cost \$4400; construction by owner.

Mo., St. Louis.—Ernest Preisler will erect 2-story commercial building on South 11th St.

N. C., Charlotte.—E. C. Griffith, 214 S. Tryon St., has plans by W. H. Peeps, Charlotte, for building at 7th and N. Tryon Sts.; 2 stories and 6 apartments; 40x30 ft.; 3 stories and basement; standard construction; composition roof; steam heat; cost \$16,500; construction begins Apr. 1. Address owner. (Lately noted.)

N. C., Fayetteville.—Stein Bros. will erect building on Market Square; 4 stories; brick; stone trimmings; first 2 floors for stores; third floor, office; fourth, hall; roof garden; 48x50 ft.; cost \$25,000 to \$30,000; B. H. Stephens, Archt., Wilmington, N. C.

Okla., Calumet.—Dr. W. E. Miller plans to erect brick business building.

Okla., Fairland.—M. J. Campbell will erect brick business building.

Okla., Ft. Cobb.—J. H. Jones has plans by L. P. Larsen, Chickasha, Okla., for business building; brick; 50x100 ft.; steel I beams; tar and gravel roofing; wood flooring; metal ceiling; 2 skylights; cost \$5000.

Okla., Hammond.—J. C. Sprowls plans to erect concrete business building.

Okla., Tulsa.—A. F. Ault will erect additional story to brick building; cost \$5000.

Okla., Oklahoma City.—Sidney L. Brock will erect 2-story business building.

Okla., Oklahoma City.—Williamson Halseell-Frasier Grocery Co. will erect store building; 5 stories and basement; bids opened Mch. 28; Layton & Smith, Archts., Oklahoma City. (Lately noted.)

Okla., Pocomet.—L. P. Larsen, Chickasha, Okla., prepared plans for \$5000 business building.

Okla., Tulsa.—J. J. Culbertson will erect 3-story building on 4th St. between Main and Boulder Sts.; 50x140 ft.; brick; stone trimmings; fireproof; foundation to support 2 additional stories; cost about \$35,000.

Okla., Tulsa.—J. J. Culbertson will erect \$25,000 brick building.

S. C., Anderson.—C. C. Hindman and W. K. Hudgens of Pelzer, S. C., are reported to improve Hotel Williamston, providing store, etc. (See Hotels.)

S. C., Woodruff.—Bethel Lodge, A. F. and A. M., plans to erect building, lower floor of which will possibly be used for stores. (See Association and Fraternal.)

Tenn., Memphis.—J. Shapero has plans by W. C. Lester, Memphis, for store and apartment building; 2 stories; brick; 50x90 ft.; lower floor, stores; upper floor, 4 or 5-room apartments; cost \$10,000.

Tex., Beaumont.—Phelan-Josey Grocery Co. is having plans prepared by Cook & Co., Beaumont, for business building; 3 stories; 120x190 ft.; solid concrete exterior; automatic sprinkler system; cold-storage plant; cost \$45,000.

Tex., Brownwood.—J. L. Morgan will erect 2-story and basement brick business building.

Tex., El Paso.—J. A. Baudreaux will erect building in 500 block S. El Paso St.; cost \$3500.

Tex., El Paso.—A. J. Brown will erect 3-story store and apartment building at Myrtle and Austin Sts.; red brick; cost \$7000; J. R. Fisk, Archt., El Paso.

Tex., Galveston.—Peter Gengler Co., 2007 Market St., will erect addition to building; 5 stories; reinforced concrete; 40x120 ft.; cold-storage plant; sanitary bakery, etc.

Tex., Houston.—Alkemeyer's, Inc., increased capital stock from \$10,000 to \$25,000; will remodel building at cost of \$25,000.

Tex., Kaufman.—Greer M. Taylor, Dallas, will rebuild structure lately noted damaged by fire.

Tex., San Antonio.—L. and A. P. Ward will erect business building.

Tex., San Antonio.—Albert Friedrich will erect four or more 1-story store buildings; reinforced concrete construction.

Tex., Waco.—L. Fred and T. W. Glass will erect business building to be occupied by McLendon Hardware Co.; 1 story; 40x60 ft.; brick.

Tex., Wichita Falls.—J. W. Stringer and W. L. Robertson purchased Ruck's Hotel property on 8th St. and plan to erect two-story brick building.

Va., Gilmerton.—John S. Roper Lumber Co., Norfolk, Va., will rebuild burned commissary. (Lately noted burned.)

Va., Newport News.—E. J. Graff will erect five 2-story brick buildings and remodel other structures on Jefferson Ave.; cost \$25,000.

Va., Roanoke.—Chas. Assey will erect 1-story store; brick; cost \$4000.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—George N. Bell, Southern Bldg., let contract to J. E. Fox, 37 R St. N. E., Washington to erect apartment-house at 2524 17th St. N. W.; 43x129 ft.; mill construction; Carey roof; cost \$25,000; also let contract to H. G. Wilson for bricklaying, and to Isadore Frund, 1315 7th St. N. W., Washington, for plumbing; Hunter & Bell, Archts., Southern Bldg., Washington. (Lately noted.)

Mo., St. Louis.—Newstead Investment Co. let contract to W. L. Hackman, St. Louis, to erect 2-story tenement-house; cost \$7000.

Mo., St. Louis.—Ida B. Fisher let contract to H. H. Fisher, St. Louis, to erect 2-story tenement-house; cost \$4000.

Tenn., Knoxville.—C. B. Atkin let contract to erect store and apartment building. (See Stores.)

Tenn., Memphis.—Wellford estate let contract to Clinton Lumber Co. to remodel residence for apartments; will provide four 4-room suites; steam heat; cost \$3000.

Tenn., Nashville.—H. E. Sexton let following contracts for erection of apartment-house: Foundation, A. D. Brown; carpentry, Causey & Therman; cut stone, Oman Bowling Green Stone Co.; roofing, marble and tile, Phillips & Buttorff Mfg. Co., all of Nash-

Va., Roanoke.—S. H. Kress & Co., 350 Broadway, New York, is reported to erect 3-story business building.

W. Va., Logan.—William Ghiz will erect two buildings; two stories; brick lower floor for commercial purposes; upper floor offices and apartments.

W. Va., Martinsburg.—F. W. Woolworth Co., New York, leased building and will expend about \$5000 to remodel; place entrance in center, install heating system and lighting facilities, remove partitions, provide ceiling, etc.; plans in progress.

THEATERS

D. C., Washington.—Harry M. Crandall, 802 1st St. N. W., has plans for theater on 14th St. N. W.; 100x160 ft.; seating capacity 1500.

Ga., Atlanta.—Bonita Theater will expend \$4356 to alter theater; day labor.

Ga., Fort Valley.—Geo. Slapkey will erect opera-house to seat 900.

La., Natchitoches.—J. H. Williams has plans by Edward Neld, Shreveport, La., for opera-house, store and office building; about 107x104 ft. (Lately noted.)

Miss., Clarksville.—W. J. Williams, Secy. Treas. Crescent Amusement Co., will erect Elite Theater.

Md., Baltimore.—A. Valentini has plans by A. Lowther Forrest, 314-15 Law Bldg., Baltimore, for theater at 2618-20 Harford Ave.; contractors estimating are Consolidated Engineering Co., Equitable Bldg.; L. J. Brown, Park Heights and Belvidere Aves.; C. C. Watts, 407 E. 25th St.; L. J. Schoenlein, 2217 E. Baltimore St.; Geo. Runnecke & Sons, 305 St. Paul St.; all of Baltimore.

Mo., Joplin.—Electric Theater Co., of which J. L. Carlisle is a director, has option on site on Virginia Ave. for theater; concrete, brick and steel; stage 32 ft. deep; will construct runway to connect with present theater; install \$10,000 pipe organ; auditorium to seat 2300; cost \$75,000.

Okla., Tishomingo.—Chas. Illiam plans to erect theater building.

Tex., Galveston.—G. W. Bell, Jr., and M. Ulrich plan to erect moving-picture theater.

WAREHOUSES

Ark., Little Rock.—A. Tenenbaum, temporary address, 317 Scott St., will erect warehouse to replace structure noted damaged by fire; 3 stories; fireproof; cost \$25,000 to \$30,000.

Md., Baltimore.—American Radiator Co., main office, Chicago, local office, Munsey Bldg., will erect warehouse at Carey and Wisconsin Sts.

Okla., Tulsa.—Nichols Wire Co. will erect corrugated-iron addition to warehouse; cost \$3000.

Tenn., Memphis.—Geo. Mohr will erect building; cost \$10,000.

Tenn., Memphis.—O. K. Robertson has plans by Regan & Weller, Memphis, to remodel building to be occupied by United Stores Co.; 2 stories; cost several thousand dollars.

Va., Richmond.—Richmond Grain Exchange is interested in erecting fireproof storage warehouse.

ville; plans by Thomas W. Gardner, Nashville, call for 3-story structure; eight 5-room suites.

Va., Norfolk.—Colonial Realty Co. let contract to Jesse Johnson, Norfolk, for apartment-house at 31st and Conall Ave.; 3 stories; brick; cost \$40,000.

Va., Norfolk.—T. A. Jones let contract to Baker & Brinkley, Norfolk, to erect apartment-house; 98x57 ft.; 3 stories; fireproof; gravel roof; cost \$50,000; J. W. Lee, Archt., Norfolk. (Lately noted.)

ASSOCIATION AND FRATERNAL

La., Shreveport.—Ancient Free and Accepted Scottish Rite Masons let contract to Stewart & McGhee, Little Rock, to erect consistory; cost \$200,000; E. F. Neld, Archt., Shreveport.

Md., Baltimore.—Jones & Laughlin Steel Co., Pittsburgh, Pa., has contract for 600 tons steel for Y. W. C. A. Bldg. at Park Ave. and Franklin St., for which Geo. A. Fuller Co., Munsey Bldg., Washington, D. C., has general contract; 6 stories and basement; steel frame; reinforced concrete; tile roof; reinforced concrete floors; 69x142 ft.; cost \$217,000; Jos. Evans Sperry, Archt., Calvert Bldg., Baltimore. (Lately note

BANK AND OFFICE

Ala., Atmore.—Carney Milling Co. let contract to erect store and office building. (See Stores.)

D. C., Washington.—Citizens' Savings Bank let contract to W. P. Lipscomb & Co., 1405 F St. N. W., to erect bank building; fireproof; 32x71 ft.; rough texture brick exterior; 3 stories; lower floor to contain banking offices and stores; Milburn Hesler & Co., Archts., 710 14th St. N. W., Washington.

Ga., Augusta.—Cecil Cochran let contract to erect \$5000 office building.

Miss., Greenville.—Commercial Savings Bank let contract to Geo. W. Muller Bank Fixture Co., Atlanta, Ga., to remodel and equip bank building; also let contract to Mosler Safe Co., Hamilton, O., for vault equipment, etc.

N. C., Charlotte.—Tranquil Park Co. let contract to J. D. Grandy, Charlotte, to erect administration building; also let contract to J. P. Little & Co., Charlotte, to erect residence in connection with same; construction begun; Wheeler & Stern Co., Archts., Charlotte.

S. C., Spartanburg.—Spartan Mills Co. let contract to Willard & Bogg, Spartanburg, to erect office building; 76x50 ft.; 1-story and basement; tapestry brick; trimmed in limestone; Spanish tile roof; cost several thousand dollars.

Tex., El Paso.—Roberts & Banner let contract to John Mulligan, El Paso, to erect office and store building at Mills and Stanton Sts.; 60x112 ft.; 7 stories and basement; reinforced concrete; asbestos roof; tile and marble floors; steam heat; 3-way vault lights; 2 electric elevators; cost \$150,000; Braunton & Leibert, Archts., Two Republics Bldg., El Paso. Address contractor. (Lately noted.)

CHURCHES

Miss., Coldwater.—Methodist church let contract to J. C. Jones Co., Memphis, Tenn., to remodel building; provide additional Sunday-school rooms, remodel auditorium, install steam-heating plant, art glass windows, etc.; cost \$7000; John Galsford, Archt., Memphis, Tenn.

Mo., Carthage.—First Presbyterian church let contract to Ed Hollingsworth, Memphis, to erect building; gray mat brick; stone trimmings; 80x86 ft.; steam heat; art glass; 2-story Sunday-school; cost \$26,000; John Galsford, Archt., Memphis, Tenn. (Lately noted.)

Mo., St. Charles.—St. Louis Baptist Mission Board let contract to Murphy Construction Co., St. Charles, to erect building; 40x60 ft.; brick; slate roof; wood floors; electric lighting; probably steam heat; cost \$10,000; L. B. Pendleton, Archt., St. Louis. (Lately noted.)

Mo., St. Charles.—Second Baptist Church let contract to E. L. Murphy, St. Charles, to erect \$15,000 building; L. B. Taylor Pendleton, Archt., Central Natl. Bank, St. Louis.

Mo., St. Louis.—Holy Name Roman Catholic Church, Rev. C. E. Byrne, pastor, let following additional contracts in connection with erection of building: Terra-cotta, St. Louis Terra-Cotta Co.; sheet metal, John Clemens; brick work, Geo. T. Barry, cut stone, St. Louis Contracting Co.; millwork, North St. Louis Planing Mill Co.; carpenter work, John Dillschneider & Son; painting, Harry Wright; plastering, Jas. H. Lee & Co.; furnish brick, St. Louis Hydraulic Brick Co.; cement, Continental Portland Cement Co.; plumbing, O'Donnell Bros.; plain glass, Hadley-Dean Glass Co.; all of St. Louis; plans by Jas. S. Lee, St. Louis, call for structure 141x60 ft.; brick; slate roof; concrete floors; steam heat; electric lights; cost \$60,000. (Previously noted.)

N. C., Durham.—Methodist church, Rev. Costen J. Harrell, pastor, let contract to J. T. Salmon, Durham, to erect building on Trinity Ave.; 50x88 ft.; slate roof; steam heat; Rose & Rose, Archts., Durham. (Previously noted.)

N. C., Edenton.—Baptist church let contract to W. J. Matthews, Kinston, to erect building; brick; 82x135 ft.; steam heat; electric light; rolling partitions; accordion doors; Mt. Airy granite trimmings; Indiana limestone columns with bases and caps; copper dome, with ornamental cathedral glass; auditorium of art glass; J. M. McMichael, Archt., Charlotte, N. C. (Previously noted.)

CITY AND COUNTY

Ga., Metter.—Jail.—Candler County Comms., Stanford Bland, Clerk, let contract to Town & Save, Metter, to erect jail; two brick; fireproof; steam heat; electric light-

ing; cost \$10,000; Southern Structural Steel Co., Archt., San Antonio. (Noted in Feb.)

Ga., Rome.—Auditorium.—City let contract to C. von Burnham, Rome, for decorating city auditorium. (Other contracts lately noted.)

Md., Baltimore.—Fieldhouse.—Board of Awards let contract to H. D. Watts Co., Calvert and German Sts., Baltimore, at \$23,558 to erect fieldhouse in Clifton Park; reinforced concrete; brick foundation walls; slag roof; this structure to be ultimately basement of central structure of plant which will cost about \$125,000; Wyatt & Nolting, Archts., Keyser Bldg., Baltimore. (Lately noted.)

Tenn., Etowah.—Library.—City let contract to John R. Leach, Etowah, to erect lately-named Carnegie library; 40x80 ft.; practically fireproof; red tile roof; construction begun; cost \$3000; steam heat, \$1000; electric lights, \$200. Address N. Z. Dewees. (See Machinery Wanted—Lighting Fixtures.)

COURTHOUSES

Ga., Lafayette.—Little-Clecker Constr. Co., Anniston, Ala., Gen. Contr. for courthouse, let contract to Hoyt-Shaw Plumbing Co., Lafayette, at about \$7000 for plumbing, heating and wiring; structure 50x150 ft.; fireproof; cost about \$60,000; Charles E. Bearden, Archt., Chattanooga, Tenn. (Other contracts lately noted.)

La., Jennings.—Caldwell Bros., Abbeville, La., general contractors to erect courthouse, let following subcontracts: Wiring, Evans Bros., Ltd., Alexandria, La.; plumbing and heating, Murry Brooks Hardware Co., Lake Charles, La.; stone, Bedford Cut Stone Co., Bedford Ind.; terra-cotta, Atlantic Terra-Cotta Co., Atlanta; roofing, Ludowici-Celadon Co., Chicago; furniture, Hansell Bros., New Orleans; structural steel and iron work, Price-Evans Foundry Co., Chattanooga; plans by W. L. Stevens, New Orleans, call for structure 116x87 ft.; fireproof; tile and Barrett specification roofing; vacuum heat; cost \$85,000. (Previously noted.)

Okla., Miami.—County Comms. let contract to Union Construction Co., Muskogee, Okla., to erect courthouse; 90x90 ft.; fireproof; 4 stories; reinforced concrete foundation walls, floors and partitions; brick and stone exterior finish; cost \$75,000; C. E. Hair & Co., Archts., 417 Terminal Bldg., Oklahoma City. (Noted in Feb.)

DWELLINGS

Ala., Piedmont.—Mrs. P. S. Strickland let contract to Carter & Atkinson, Piedmont, to erect 3-room bungalow.

Ark., Batesville.—F. W. Perrin let contract to Glenn, Fugat & Martin, Batesville, to erect residence; brick veneer; cut-stone finishings; cost \$10,000.

Ark., Little Rock.—Chas. E. Liefer, 104 E. Markham St., has plans by and let contract to Geo. Liefer, 1020 Barber Ave., Little Rock, to erect dwelling; 8 rooms; ordinary construction; felt shingle roof; hot-air heat; electric lights; cost \$4500. (Lately noted.)

Ark., West Memphis.—R. E. Montgomery, Lee Lumber Co., Memphis, Tenn., has contract to erect 50 residences. (See Hotels.)

D. C., Washington.—Alphonse Patton let contract to I. C. Foster, 2957 Mills Ave. N. W., Washington, to erect 1-story hollow-tile dwelling; cost \$3000; W. R. Talbott, Archt., 1314 F St. N. W., Washington.

D. C., Washington.—Geo. T. Worthington & Son let contract to J. F. Mills & Bro., 6358 Georgia Ave. N. W., Washington, to erect five 2-story brick dwellings; cost \$6000; John M. Donn, Archt., 808 17th St. N. W., Washington.

D. C., Washington.—John W. Burke let contract to R. W. Bolling and William Todd to erect 3-story brick dwelling; cost \$13,000; Boal & Brown, Archts., 1725 H St. N. W., Washington.

D. C., Washington.—Joseph P. Stubner let contract to R. H. Sanford, 1231 6th St. N. W., Washington, to erect 2-story hollow-tile dwelling; cost \$6000; C. E. Webb, Archt., 13 Warder Bldg., Washington.

D. C., Washington.—J. J. Lerch let contract to I. C. Foster, 2957 Mills Ave. N. E., Washington, to erect 2-story frame dwelling; cost \$4000; Merrill T. Vaughn, Archt., Woodridge, D. C.

D. C., Washington.—Katherine M. Kisecker let contract to H. D. Fulmer, 3825 Legation Ave. N. W., Washington, to erect 2-story frame dwelling; cost \$3800; John A. Weber, Archt.

D. C., Washington.—Dr. Leighton Marshchalk let contract to W. Walter Vaughn, 507 Barrister Bldg., Washington, to erect dwell-

ings at 1318 and 1321 Longfellow St.; 36x33.6 ft.; frame; composition roof; hot-water heat; cost \$10,500; Merrill T. Vaughn, Archt., Woodridge, D. C. (Lately noted.)

Fla., Daytona Beach.—W. S. Wolcott let contract to I. Z. Burdick, Daytona Beach, to erect residence; 28x62 ft.; Spanish type; stucco and tile roof; pine floors; hot-air heat; electric lights; Mr. Bells, Archt.; construction begins May 1. (Lately noted.)

Fla., Jacksonville.—Geo. W. Byrnes, 20 W. Duval St., has plans by and let contract to Henry Taylor, 2904 Oak St., Jacksonville, to erect residence; 42x61 ft.; brick veneer; tile roof; hardwood and tile floors; warm-air heat; cost \$9000. (Lately noted.)

Ga., Atlanta.—Mrs. L. M. Nicholes let contract to H. W. Nicholes & Son, Atlanta, to erect 1-story 3-room frame residence; cost \$4000.

Ga., Atlanta.—Mrs. J. B. Brooks let contract to M. G. Morris, Atlanta, to erect addition to and repair residence; cost \$3500.

Ga., Atlanta.—S. J. Warner has contract to erect residence in Druid Hills; 2 stories; hollow tile construction; cost \$15,000.

La., New Orleans.—Miss Eugenie Sydam let contract to James F. Broyard, New Orleans, to erect 3 residences; cost \$8000.

Md., Baltimore.—Jerome Pipitone has plans by and let contract to Walter F. Hildey, Gwynn Oak Ave., Howard Park, Station F, Baltimore, to erect dwelling; 28x32 ft.; mill construction; slate roof; hot-water heat; electric lights; cement sidewalks; address contractor. (Mr. Hildey lately noted to erect this dwelling.)

Md., Catonsville.—Ellard Crise let contract to Schaub Bros. Construction Co., Newburg Ave., Catonsville, to erect residence at Orange Grove Heights; frame and shingle; tile roof; cost \$9500.

Miss., Greenville.—W. L. Shelton let contract to erect \$5000 brick residence; John Galsford, Archt., Memphis, Tenn.

Mo., St. Louis.—Fredk. Godron let contract to L. K. Milberger, St. Louis, to erect 2-story dwelling at 3187 Portis St.; cost \$3200.

N. C., Charlotte.—F. T. Jones let contract to J. D. Stroupe, Charlotte, to erect bungalow on E. 8th St. extension; cost \$3500.

N. C., Charlotte.—Tranquil Park Co. let contract for residence. (See Bank and Office.)

N. C., Charlotte.—V. J. Guthery let contract to J. D. Stroupe, Charlotte, to erect bungalow in Myers Park; cost \$3100.

N. C., Charlotte.—H. C. Sherrill let contract to J. D. Stroupe, Charlotte, to erect dwelling in Myers Park; 10 rooms; slate roof; hot-water heat; cost \$6000; F. L. Bonfoey, Archt., Charlotte.

N. C., Wilmington.—J. B. Huntington, 224 S. 4th St., let contract to Morton & Cox, Wilmington, to erect dwelling; 2 stories; ordinary construction; shingle roof; cost \$3000; Jas. F. Gause, Jr., Archt., Wilmington. (Lately noted.)

N. C., Winston-Salem.—Harry Taylor let contract to W. F. Joyner, Winston-Salem, to erect 6-room frame residence; cost \$4000.

N. C., Winston-Salem.—Archie Taylor let contract to W. F. Joyner, Winston-Salem, to erect residence; 6 rooms; frame; cost \$4100.

N. C., Winston-Salem.—Mrs. Francis Swann Taylor let contract to W. F. Joyner, Winston-Salem, to erect 6-room frame dwelling; cost \$4200.

S. C., Walterboro.—Manuel Paniottie let contract to erect store and dwelling. (See Stores.)

Tenn., Memphis.—W. T. Turner let contract to Clinton Lumber Co., Memphis, to erect 1-story 6-room frame dwelling at 3015 Kyle Ave. and 7-room frame and stucco dwelling at 2004 Evelyn Ave.; cost \$5500.

Tenn., Memphis.—Colonial Trust Co. let contract to L. E. Moody, Memphis, to erect 5-room frame and stucco bungalow at 1850 Young Ave.; 2-room frame addition at 1699 Monroe Ave.; install heating plant same address; erect 1-story 2-room frame and stucco garage and servants' house at 1307 Agnes Pl.; cost \$3500.

Tenn., Memphis.—O. B. Kerr, Jackson, Tenn., let contract to Mr. Berry to erect residence; stone and stucco; cost \$4200; John Galsford, Archt., Memphis.

Tex., Ft. Worth.—F. S. Buckley let contract to P. L. Jones, Ft. Worth, to erect residence; 2 stories; 5 rooms; frame; cost \$6000.

Tex., Houston.—R. S. Sterling Investment Co. let contract to E. L. Crain & Co., Houston, to erect dwelling in Rossmoyne addition; 10 rooms; brick and stucco.

Tex., Waco.—T. P. Duncan let contract to H. A. Dryere, Waco, to erect residence; 9

rooms; heavy frame construction; shingle roof; pine and hardwood double floors; natural gas heat; city lighting; cost \$6000; R. D. Easterwood, Archt., Waco. (Lately noted.)

Va., Hopewell.—W. T. Clute has contract to erect several dwellings in High Point Addition.

Va., Norfolk.—R. A. Hanrahan let contract to J. W. Hodder, Norfolk, to erect residence; 2 stories; frame; slate roof; cost \$3500.

Va., Richmond.—John S. Christain is reported to have let contract to Davis Bros., Richmond, to erect 2-story brick dwelling; cost \$15,000.

W. Va., Martinsburg.—A. Hall Hertzog let contract to C. D. Barnes, Martinsburg, to erect dwelling; 28x32 ft.; ordinary construction; slate roof; steam heat; electric lights; cost \$2500; construction begins April 1. (Lately noted.)

W. Va., Mullens.—Trace Fork Coal Co. let contract to J. L. Early, Mullens, to erect 10 dwellings for employees.

GOVERNMENT AND STATE

W. Va., Martinsburg.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract at \$9239 to J. L. Robinson Construction Co., 46 Knickerbocker Bldg., Baltimore, Md., to alter postoffice building. (Noted in February.)

HOSPITALS, SANITARIUMS, ETC.

Ky., Carrollton.—County let contract to Cal Thomas & Co., Louisville, to erect infirmary; 2 stories; brick; water and electric light plants in basement.

La., Hot Well.—Dr. J. W. Phillips, Boyet, La., has plans by and let contract to H. A. Weaver, Boyce, to erect lately-noted hotel and sanatorium; 54x90 ft.; frame; composition roof; yellow pine flooring; natural gas heating; electric lighting; cost \$7000. Address Mr. Weaver. (See Machinery Wanted—Lighting Plant.)

Va., Richmond.—Dr. J. Shelton Horsley, 617 W. Grace St., let contract to Wise Granite & Construction Co., Richmond, to erect annex to St. Elizabeth's Hospital; 5 stories, including basement; brick and reinforced concrete; fireproof; hardwood pine floors on cement and tile; vapor heat; electric lights; cost \$15,000; construction begins Apr. 1. (Lately noted.)

W. Va., Charleston.—St. Francis Hospital let contract to W. A. & J. L. Abbott, Charleston, to erect hospital; 76x74.4 ft.; sun parlors, 13.6x14 ft.; brick, stone, concrete and wood; Barrett roofing; tile, concrete and wood floors; city electric lighting; cost \$60,000; heating plant, \$4000; elevators, \$300. Address Contrs. (Other contracts lately noted.)

HOTELS

Ark., West Memphis.—R. E. Montgomery, Lee Lumber Co., Memphis, Tenn., has contract to build 20-room hotel and 50 residences and stores.

Ga., Manchester.—Manchester Cotton Mills let contract to J. P. Corley, Manchester, to erect 13-room addition.

La., Hot Wells.—Dr. J. W. Phillips, Boyet, La., let contract to erect hotel and sanatorium. (See Hospitals.)

Tex., Seguin.—Seguin Hotel Co. let contract to Robt. Uhr, San Antonio, to erect hotel and to West & Gutzeit, San Antonio, for electrical, heating and plumbing work; 4 stories; reinforced concrete; fireproof; faced with brick and terra-cotta; 50 rooms; dining-room 44x30 ft.; steam heat; cost \$70,000; Leo M. J. Diehlmann, Archt., San Antonio. (Lately noted.)

Va., Roanoke.—John P. Pettyjohn & Co., Roanoke, general contractors to erect addition to Hotel Roanoke, let contract at about \$12,000 for plumbing work to Roanoke Sheet Metal Co., Roanoke; plans by Frye & Cheerman, Roanoke, call for 4-story structure; fireproof construction, etc.; cost \$100,000. (Previously noted.)

W. Va., Fairmont.—McClintic-Marshall Construction Co., Pittsburgh, Pa., has contract for about 600 tons steel shapes for hotel for Fairmont Hotel Co.; 6 stories; 300 rooms; fireproof; 2 elevators; 120x135 ft.; slag roof; steam heat; electric lights; cost \$350,000; Milburn, Heister & Co., Archts., 70 14th St. N. W., Washington, D. C. (Lately noted.)

MISCELLANEOUS

Fla., Miami.—Undertaking Establishment—A. A. Adair, Portland, Ind., has plans by and let contract to R. F. Archibald, 508 Cordova Ave., Miami, to erect building for undertaking establishment; 45x40 ft., with war-

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house 2x30 ft.; construction of Dennison interlocking tile 12 in. thick; Johns-Manville asbestos roofing; cement floors; cost about \$800. (King Undertaking Co. lately noted to erect this structure.)

N. C. Black Mountain—Auditorium.—National Musical Festival of America, Jeter C. Pritchard, Prest., Asheville, N. C., increased capital stock from \$250,000 to \$500,000; let contract to Elliott Building Co., Hickory, N. C., to erect auditorium; plans by Louis H. Anbury, Charlotte, N. C., call for structure 400x500 ft.; fireproof and ordinary construction; 5-ply tar and gravel roof; brick, reinforced concrete and steel; seating capacity 21,500; cost \$300,000; steam heat, \$25,000; also let contract for 800 tons structural shapes to Virginia Bridge & Iron Works, Roanoke.

N. C. Salisbury—Stable and Garage.—R. Lee Mahaley, Richmond, Va., let contract to C. E. Propst, Salisbury, to erect garage and livery stable; construction begun; Wheeler & Stern Co., Archt., Charlotte, N. C.

Tenn., Nashville—Clubhouse.—Commercial Club Corporation let contract to Rock City Construction Co., Nashville, to remodel Vanderbilt Law Bldg. for clubhouse; 60x168 ft.; 6 stories; ordinary construction; Barrett specification and asbestos roofing; heating and lighting not determined; cost \$49,000; electric elevator, about \$7500; also let contract for steel and iron to Nashville Bridge Co., Nashville; A. Ten Eyck Brown, Atlanta, and Russell E. Hart, Nashville, Archts. (Lately noted.)

Va., Hopewell—Bowling Alley, etc.—Tri City Amusement Co. let contract to erect building for bowling alley, etc. (See Theaters.)

SCHOOLS

Miss., Jackson.—City let contract to Stark & Cox, Jackson, to erect school; 59x85 ft.; ordinary construction; composition roof; wood floors; direct-indirect steam heat; cost \$24,000; W. N. Austin, Archt., Jackson. (Lately noted.)

Miss., Quitman, R. F. D.—Trustees let contract to C. O. Eure, Hattiesburg, Miss., to erect agricultural high school near Hattiesburg; brick veneer; metal shingle roof; steam heat; electric plant or gas to be installed in building; P. J. Krouse, Archt., Meridian, Miss. (Lately noted.)

N. C., Durham.—School Board let contract at \$89,555 to J. A. Jones, Charlotte, to erect Watts and Morehead Schools; Linthicum & Linthicum, 502 Loan & Trust Bldg., Durham, Associate Archts., with Chas. Howard L'oyd, Harrisburg, Pa. (Lately noted.)

Okla., Shamrock.—School Board let contract to Ed L. Quimby to erect brick school building; voted \$15,000 bonds.

S. C., Greenville.—Trustees let contract to J. F. Gallivan Bldg. Co., Greenville, to erect school and to Barr Hardware Co., Greenville, for plumbing; 119x107 ft.; 1-story wing in rear; auditorium to seat 500; main structure 2 stories and basement; rough texture brick; artificial stone trimming; solid steel sash; birch floors; non-slip metal treads on stairs; combination steel and wood furniture; down-draft boiler for heating plant; ventilating system; cost \$28,000 to \$30,000; J. E. Sirrine, Archt., Greenville. (Previously noted.)

S. C., Greenville.—School Board let contract at \$23,500 to Haynesworth & Lawton, S. C., to erect John Rennie Blake School; at \$1500 to Greenwood Hardware Co., Greenwood, for plumbing, and at \$1250 to T. P. Klad, Greenwood, for heating; plans by J. E. Summers, Greenwood, call for 70x120-ft. brick; cement and wood floors; Barrett specification roof; cost \$26,000; steam heat, \$1500; electric lights. (Previously noted.)

Tenn., Clarksville.—Board of Education let contract at \$30,596 to D. M. Crawford Co., Builders' Exchange, Memphis, to erect addition to high school; also let contract at \$500 to Noble Plumbing & Heating Co., Princeton, Ind., for heating, ventilating and plumbing; 106.10x79.2 ft.; 3 stories and basement; corridor 23x50 ft.; ordinary construction; composition roofing; cost \$31,000; direct, indirect system heating and ventilating, \$2500; electric lighting, \$700; J. W. Gaddis, Archt., Vincennes, Ind.; construction begins Apr. 1. (Lately noted.)

Tenn., Nashville.—Board of Education let contract to T. J. Christman & Co., Nashville, for carpenter work only on Park Avenue School; E. E. Dougherty, Archt., Stahlman Bldg., Nashville.

Tex., College Station.—Agricultural and Mechanical College let contract at \$10,861 to H. W. Greenway, Ft. Worth, for plumbing,

heating and vacuum cleaning system for hospital building, for which W. R. Hedrick Construction Co., Dallas, has general contract; building to cost \$75,000; completion by July 1; R. Adelsperger, Archt., head of Dept. of Architecture of college.

Tex., Denton.—School Board let contract to Geo. H. Harris, Denton, to erect school; 54x75 ft.; frame; gravel roof; wood floors; cost \$3700. (Lately noted.)

Tex., Houston.—School Board let contract at \$12,289 to J. J. Green to erect addition to Travis School; to Geo. J. Robischung for plumbing; Lane Co., heating; Barden Electric & Contr. Co., wiring; all of Houston; Maurice J. Sullivan, Archt., Houston. (Lately noted.)

STORES

Ala., Atmore.—Carney Milling Co. has plans by Hutchisson & Denham, Mobile, Ala., for store and office building; 2 stories; pressed brick; cost \$20,000; J. T. Jett & Co., Contrs., Mobile.

Ala., Fairfax.—Fairfax Mills let contract to West Point Iron Works, West Point, Ga., to erect 3-story brick store building.

Ark., Nashville.—Gaines & Ferguson let contract to erect brick business building; 25x35 ft.

D. C., Washington.—Citizens' Savings Bank let contract to W. P. Lipscomb & Co., 1405 F. St. N. W., to erect store and bank building. (See Bank and Office.)

D. C., Washington.—James Poulos, 912 7th St., let contract to James T. Kenyon, 817 14th St. N. W., Washington, to erect store building; 69x85 ft.; ordinary construction; slag roof; cost \$15,000; steam heat, \$900; electric lights, \$400; A. W. Brink, Archt., 14th and U Sts. N. W., Washington. Address contractor. (Lately noted.)

Miss., New Albany.—Robbins Cot Co. has plans by and let contract to T. L. Reid to erect store building; 25x50 ft.; brick; metal roof; wood floors.

Mo., St. Louis.—Martha Realty Co. let contract to Gorg Co., St. Louis, to erect 2-story mercantile building; cost \$7500.

N. C., Wilmington.—Payne Drug Co. (Harry E. Payne) let contract to Morton & Cox, Wilmington, to erect store and apartment building; 31x75 ft.; tin roof; tile and wood floors; cost \$9000; heating plant, \$400; sidewalk or vault lights, \$500; Gause & Lynch, Archts., Wilmington.

Okla., Oklahoma City.—Mrs. Emma Greer let contract to erect brick business building.

S. C., Sumter.—Neill O'Donnell let contract to Harbin Constr. Co., Lexington, N. C., to erect store building; 52x140 ft.; fireproof; tar and gravel roof; reinforced concrete floors; cost \$25,175; N. Gaillard Walker, Rock Hill, N. C., and Johnson & Deal, Archts.

S. C., Walterboro.—Manuel Panlottie has plans by and let contract to D. C. L. Hiers, Walterboro, to erect store and residence; 2 stories; 47x40 ft.; brick; tin roof; wood floors; grates and stoves; cost \$3400; electric light, \$125. (Lately noted.)

Tenn., Knoxville.—C. B. Aiken let contract to A. J. Stair, Knoxville, to erect store and apartment-house; 2 stories; 48x75 ft.; ordinary construction; tar and gravel roof; steam heat; electric lights; cost \$12,500; also let contract to W. A. and H. A. Gervin for brick; D. G. Arwood, sheet metal; Wm. J. Oliver Mfg. Co., structural steel; all of Knoxville; A. E. Gredig, Archt., Knoxville. (Lately noted.)

Tex., Lubbock.—J. C. Phillips let contract to W. M. Rice, Amarillo, Tex., to erect store building; 35x115 ft.; 1 story; brick; tar and gravel roof; pine floors; electric lights; cost \$4000; L. A. Hitchcock, Archt., Lubbock.

Va., Norfolk.—John L. Roper let contract to J. M. Echols, Norfolk, to erect three one-story stores on Freemason St.; 46½x75 ft.; ordinary construction; brick; cost \$3875; Russell Edward Mitchell, Archt., Norfolk. (Noted in Feb.)

THEATERS

Va., Hopewell.—Tri City Amusement Co. let contract to Adams & Martin, Hopewell, to erect previously-noted building for moving-picture theater, bowling alley, etc.; 25x110 ft.; brick, steel and stucco; metal roof; tile and wood floors; cost \$12,000; steam heat, about \$600; Richard A. Menden, Archt., Mechanics' Bank Bldg., Petersburg, Va.; address S. A. Xippas, Gen. Mgr., P. O. Drawer T, Hopewell. (See Machinery Wanted—Electrical Equipment.)

WAREHOUSES

Fla., Gary.—E. O. Painter Fertilizer Co., Jacksonville, Fla., let contract to R. E.

Fletcher, Plant City, Fla., to erect warehouse; frame; galvanized iron; sides and roof.

Mo., St. Louis.—Seventh Street Realty & Power Co. let contract to Smith & Son, St.

Louis, to erect addition to warehouse; cost \$3900.

N. C., Kinston.—S. T. Hooker, Greenville, N. C., let contract to Isaac Rochelle, Kinston, to erect tobacco warehouse; cost \$15,000.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Abattoir Equipment.—See Packing Plant (Meats) Machinery.—Gordon Aronhime.

Air Compressors, Tanks, etc.—Automatic Pump Corp., J. E. Parker, Prest.-Mgr., Box 577 (company's office address, 211 Citizens' Bank Bldg.), Norfolk, Va.—Prices on 2 to 6 H. P. oil engines, air tanks, air compressors, air-reducing valves, air chambers and individual electric-lighting plants.

Art Glass.—Thomas M. Brownlee, Belzoni, Miss.—Prices on art glass for windows of \$12,000 church.

Bank Fixtures.—R. W. Gatliff, Gates, N. C.—Prices on safe, vault and other bank fixtures.

Belting, Shafting and Pulleys.—See Engines (Gasoline), etc.—W. L. Miller.

Boiler.—National Waterproofing Co., 917 Tennessee Trust Bldg., Memphis, Tenn.—Prices on boiler.

Boiler and Engines.—See Crushing (Rock) Equipment.—High Point Stone Co.

Belting, etc.—Hines Lumber Co., W. J. Hines, Gilkey, N. C., Mgr.—Prices on belting and supplies for plant at Meriwether, S. C.

Boiler and Engine.—W. P. Biddle, Route 4, Knoxville, Tenn.—100 H. P. return tubular boiler, complete, less steam; also 50 H. P. center-crank automatic engine; second-hand.

Blinds.—Fowler-Flemister Coal Co., Milledgeville, Ga.—100 inside Venetian blinds.

Boiler, Engine, etc.—Smoot Sand & Gravel Corp., L. E. Smoot, Prest., Foot of 3d St. S. E., Washington, D. C.—Prices on boiler, engine, pumps, etc., for dredge now under construction.

Boiler.—Maryland Clay Products Co., Louis N. Rancke, Mgr. and Ch. Engr., Lonaconing, Md.—Vertical type water-tube boiler; 100 H. P.

Blowers, Pumps, etc.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until April 11 for delivering blowers, railroad box cars, chain, water filters and coolers, steel forgings, pumps, motor truck and silver-plated ware at Navy-yard, Brooklyn, etc. Apply for proposals to supply officer, Navy-yard, Brooklyn, N. Y., or to Bureau.

Bridge Construction.—Monroe County Board of Revenue, I. B. Slaughter, Prest., Monroeville, Ala.—Bids until April 24 to construct reinforced concrete culverts and bridges and steel bridges on public roads; information from Carl Barker, County Engr.

Bridge Construction.—Hardin County Fiscal Court, J. L. Irwin, Clerk, Elizabethtown, Ky.—Bids until April 3 for following: Furnishing and erecting substructure and superstructure for steel bridge with concrete floor on Dixie Highway, 1 mi from Elizabethtown; tearing down and moving old bridge to new site; building new substructure and erecting old bridge on same; building concrete culverts and bridge floors at other places on Dixie Highway, ranging from 2x4 opening to 30 floor slab; plans and specifications on file with County Road Engr. at Elizabethtown and State Road Commr. at Frankfort.

Bridge Construction.—John M. Murch, County Auditor, Galveston, Tex.—Bids until April 10 to construct temporary road bridge across Galveston Bay; plans and specifications furnished by County Engr.

Bridge Construction.—Road Commission, Third Ward, Vermilion Parish, D. L. McPherson, Chrmn., Abbeville, La.—Bids until April 12 to construct about 250 cu. yds. reinforced concrete bridges and culverts; blanks for bids, plans and specifications obtainable from W. E. Knox, Engr., Abbeville.

Bridge Construction.—Board of Commissioners, J. W. Dashiell, Secy., Nashville,

Tenn.—Bids until April 18 to construct Charlotte Ave. overhead bridge and approaches; separate bids as follows: Construction reinforced concrete slab overhead bridge across tracks of Nashville, Chattanooga & St. Louis R. R. in Charlotte Ave., including abutments, wing walls and incidental work (estimated quantity, 1-2-4 concrete construction 765 cu. yds.; abutments and wing walls 13-6 concrete 1165 cu. yds.; reinforcement rods, 111,000 lbs.); paving with creosoted wood blocks roadway of said bridge (quantity 400 sq. yds.); widening, filling, grading, bedding and macadamizing embankment and approaches to bridge (quantity: earth embankment 18,300 cu. yds.; bedding stone, 750 cu. yds.; macadam, 715 cu. yds.); temporary shifting, shoring up and supporting street railway tracks of Nashville Ry. & Light Co. and maintenance of traffic thereon during construction and for permanent reconstruction of street railway tracks upon completion of bridge and its approaches (estimated length, double track, 900 lin. ft.); plans and specifications on file with W. W. Southgate, City Engr.; copies furnished for \$5; bids on proposal blanks furnished by City Engr.; Robt. Ewing, Mayor.

Building Materials.—D. D. Harrigan Co., 504 Moore Bldg., San Antonio, Tex.—Prices on building materials, tile, hot-air plants and electric fixtures for \$250,000 worth of dwellings.

Building Materials.—Board of Regents, State Hospital for the Insane, C. Fred Williams, Supt., Columbia, S. C.—Bids until April 12 for following materials for repairs to buildings: Sand, nails, lime, plaster, framing lumber, roof, pine flooring, millwork, ceiling, steel, cast and wrought-iron, reinforcing steel, steel doors, metal laths, brick, tile partition blocks, cut stone and crushed stone.

Building Materials.—W. J. Smith, Oriental, N. C.—Prices on building materials for 10 or 12-room dwelling.

Building Materials.—Longest & Tessler Co., Greensboro, N. C.—Estimates until April 5 on following items for municipal auditorium at Savannah, Ga.: Floor tile, tile partitions, granite, limestone, ornamental terra-cotta, marble works, marbleoid floors, millwork plate and other glass, roofing and sheet metal work, painting, ornamental iron, structural steel, elevator doors, electric work, elevators, heating and ventilating.

Building Materials, etc.—G. Lloyd Preacher, Archt., Augusta, Ga.—Catalogues, samples and prices on building materials and supplies.

Building Materials, etc.—Barry & Smith, Archts., Paris, Tex.—Catalogues, samples, prices, etc., of interest to Archts.

Candy Manufacturing Machinery.—Peerless Candy Co., W. G. Jones, Mgr., Roanoke, Va.—Prices on candy-making machinery.

Cars.—See Blowers, Pumps, etc.—Bureau Supplies and Accounts.

Cars.—Pennsylvania Equipment Co., Philadelphia, Pa.—Three second-hand passenger coaches, 60 ft. long; two or three passenger coaches, second-hand, approximate length over all 46 ft.; truck centers, 30 ft.; wheelbase, 5½ ft.

Cars.—Pennsylvania Equipment Co., Coleman Bldg., 1438 S. Penn Sq., Philadelphia, Pa.—Two or three 36-in.-gauge passenger coaches and 100 Roger ballast cars; also 50-ton-capacity railroad crane or derrick car.

Cement.—Improved Brick & Stone Co., 2217 Masonic Temple Bldg., Meridian, Miss.—Wholesale prices on high-grade Portland cement in carloads f. o. b. Meridian; also wants terms for agency.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Cement Products Machinery.—Hopewell Brick Corp., Hugh K. Brownlag, Mgr., Petersburg, Va.—Prices (for plant at Hopewell) on following: Sewer pipe forms; tile machine; cement block machines; belt conveyors; water tower of not over 40-ft. height; dump wagons; 2-ton motor trucks; office furniture.

Coat-hanger Trade.—J. Kartun, 121 Newington Causeway, London, Eng.—Agencies in trade kindred to lines we are now manufacturing—coat-hangers from wood.

Charging Machine.—Pennsylvania Equipment Co., Coleman Bldg., 1438 S. Penn Sq., Philadelphia, Pa.—Second-hand charging machine.

Condenser.—"Condenser," care Manufacturers Record.—Condenser for 60,000 lbs. steam; condensing water 80 degrees; Le Blanc preferred.

Conveyor (Retarding).—Blue Grass Coal Corp., H. K. English, Mgr., Johnson City, Tenn.—Retarding conveyor for new mine, Hazard, Ky.

Copper Staves, Plates and Tools.—Ver. Bureau voor Handelsinlichtingen, O. Kamerlingh Onnes, Directeur, Oudebrugsteeg 16, Amsterdam, Holland.—Interested, with view to representation, in correspondence with American manufacturers of copper in staves and plates, technical and electro-technical plates and tools.

Conduit and Wiring.—See Lighting Fixtures.—Treasury Dept.

Cotton Cloth.—National Waterproofing Co., 917 Tennessee Trust Bldg., Memphis, Tenn.—Samples and prices of "cast-iron" domestic—direct from mill or from agents.

Cotton Machinery.—Jos. F. Vickery, P. O. Box 450, Atlanta, Ga.—Data and prices on machinery to manufacture absorbent cotton.

Cranes (Locomotive and Ladle).—Pennsylvania Equipment Co., Coleman Bldg., 1438 S. Penn Sq., Philadelphia, Pa.—15 to 20-ton locomotive crane, with magnet; also 20-ton ladle crane, 60-ft. span; both second-hand.

Crushing (Rock) Equipment.—High Point Stone Co., D. R. Roper, Secy., High Point, N. C.—Prices on steam drills, boiler and engines, and rock-crushing plants.

Dairy Machinery.—R. M. Dairy Co., E. W. Marshall, Pres., Waco, Tex.—Interested in data and prices on equipment for dairy improvement.

Drills (Rock, Steam).—See Crushing (Rock) Equipment.—High Point Stone Co.

Drugs and Chemicals.—G. J. Tsatsos, 37 Rue d'Hermes, Athens, Greece.—Interested in following: Glycerine, 30 degrees, 3000 kgs.; bismuth subnitrate, 30 kgs.; ammonium carbonate, 600 kgs.; naphthalene (en pallettes), 15,000 kgs. (in bags of 100 kgs.); castor oil extra fleur, 15,000 kgs. (in tin boxes of 25 kgs.); morphine chloride, 15 kgs. (in bottles 100 gr.); aspirine (acide-acet, salicylique), 750 gr. (in packets of 250 gr.); extrait fougere etherique, 1500 gr. (in bottles of 500 gr.); acide borique (en pallettes), 15,000 kgs. (in boxes of 50 kgs.).

Electric Generator.—Piedmont Electric Co., Asheville, N. C.—45 to 60 K. W., 60-cycle, 3-phase generator, 2200 volts, complete with exciter and switchboard in first-class second-hand condition.

Electrical Equipment.—S. A. Nippas, P. O. Drawer T, Hopewell, Va.—Prices on electrical equipment for \$12,000 moving-picture theater.

Electrical Equipment.—Board of Public Works Commission, Honea Path, S. C.—Prices on 10 K. W. voltage regulator-automatic; 3 primary meters with transformers 50, 20 and 10 amperes, respectively; one T. P. D. T. 200-ampere, 3000-volt oil circuit breaker.

Electric Motors.—See Packing Plant (Meats) Machinery.—Gordon Aronhime.

Electric Motors.—See Engines (Gasoline), etc.—W. L. Miller.

Electric Fixture.—See Building Material.—D. D. Harrigan Co.

Electrical Machinery.—Maryland Clay Products Co., Louis N. Rancke, Mgr. and Ch. Engr., Lonaconing, Md.—Electrical equipment for adapting 33,000-volt current; 10-ton motor (locomotive). (See Locomotive.)

Electrical Machinery, etc.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until April 11 for delivering fire clay, rubber ferrules, motor generators, hardware, etc., lumber, saw and dado and winding machines, oars, starter panels, plumbago, surfacer, Turkish towel and transformers at Navy-yard, Norfolk. Apply for proposals to supply officer, Navy-yard, Norfolk, or to Bureau.

Electrical Machinery.—Bureau Yards and Docks, Navy Dept., Washington, D. C.—

Bids until April 22 for furnishing 60-kilowatt 3-machine motor generator set and switchboard at naval station, New Orleans; specifications on application to Bureau or to industrial manager of naval station.

Electrical Machinery.—City Point Ice Corp., Hopewell, Va.—Dynamo, 25 K. W., 220 volts, A. C., direct connected to reciprocating or turbine engine; consider direct current machine in good second-hand condition.

Electric Motor.—See Saw (Portable Cut-off).—Daniel D. Smith.

Electric Light Plants.—See Air Compressors, Tanks, etc.—Automatic Pump Corp.

Electrical Supplies.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—50,000 ft. double conductor cable, schedule 9445, delivery Newport, R. I.; 1631 ft. three-conductor cable, schedule 9444, delivery Philadelphia; 2080 transmitting condensers, schedule 9452, delivery Boston; 6 motors, schedule 9439, delivery Puget Sound, Wash.; 9 1/2 H. P. ventilating sets, schedule 9456, delivery Mare Island, Cal.; three 35 K. W. oil-cooled transformers, schedule 9445, delivery Washington; miscellaneous antenna wire, schedule 9452, delivery Boston.

Electric Plant Materials.—See Waterworks, Electric Light and Sewer Materials.—City of Nashville, N. C.

Electric Work.—See Heating.—William M. Rice Institute.

Elevator (Hand).—J. L. Morgan, Brownwood, Tex.—Prices on hand elevator.

1732, Houston, Tex.—Bids until April 7 for heating, plumbing and electric work in 3-story fireproof south wing of residential group No. 2; plans, details and specifications on application at Houston office of Cram & Ferguson, 1106 Scanlan Bldg., Houston.

Heating.—L. C. Prather, Baldwin, Miss.—Prices on heating equipment for \$5000 bank and office building.

Heating Plant, etc.—Edgar Odell Lovett, William M. Rice Institute, P. O. Box 1732, Houston, Tex.—Bids until April 7 for heating, plumbing and electric work in 3-story fireproof south wing on residential group No. 2 for William M. Rice Institute; plans, details and specifications obtainable from Archts., Cram & Ferguson, 1106 Scanlan Bldg., Houston, for \$25.

Hoist (Electric).—McCrosin Engineering Co., American Trust Bldg., Birmingham, Ala.—Three drum electric hoist with boom-swinging arrangement, 3-phase, 60-cycle motor; consider second-hand machine in first-class condition; quote prices, delivered Birmingham.

Ice Plants.—J. L. Barnard, Grenada, Miss.—Addresses of 2 or 3 manufacturers of artificial refrigeration machinery or plants.

Knitting Machinery.—R. J. Morrison, Cherryville, N. C.—Data and prices on knitting machinery.

Lighting Plant.—H. A. Weaver, Boyce, La.—Prices on lighting plant (about 100 lights) for hotel and sanatorium.

FOR the benefit of business concerns, engineers, contractors, machinery manufacturers, dealers and others who find it profitable to follow up daily the industrial, commercial, railroad and financial development of the South and Southwest as published in this Construction Department,

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The construction news as published in the Daily Bulletin is invaluable to all business people who want to keep in daily touch with the organization of business enterprises of all kinds throughout the whole South. Unlimited possibilities for the creation of business, for securing contract work, for the sale of machinery and supplies of all kinds, for bond buyers and others, are to be found through a close following up of the news in the Daily Bulletin.

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Elevator.—Southern Structural Steel Co., San Antonio, Tex.—Dumbwaiter of 50 to 60 lbs. capacity.

Engine (Automatic).—See Boiler and Engine.—W. P. Biddle.

Engine Bodies.—See Water-wheels, etc. Bureau Supplies and Accounts.

Engine (Gasoline).—See Saw (Portable Cut-off).—Daniel D. Smith.

Engines (Gasoline), etc.—W. L. Miller, Prest. Miller Tire Armory Co., Stone Cliff, W. Va. (to locate at Roanoke, Va.).—Prices on 6 to 15 H. P. gasoline engines; 6 to 15 H. P. electric motors; line shafting, belting, pulleys, etc.

Engines (Oil).—See Air Compressors, Tanks, etc.—Automatic Pump Corp.

Gas Plant.—See Water-works Improvements and Gas Plant.—City of Wilson, N. C.

Glass Cylinders.—Green-Adler Co., Magnolia St., Daytona, Fla.—Correspondence with manufacturers of glass cylinders; will want 3 cylinders each, 40 in. long, 1 1/2 in. inside diam., and about 3-16 in. thick.

Grinding Machinery.—Minter-Moore Printing Co., Norfolk, Va.—Data and prices on machinery to grind pulp from paper scraps.

Hammer (Steam).—C. C. Penny, 1 S. 20th St., Birmingham, Ala.—450-lb. steam hammer.

Heating.—Thomas M. Brownlee, Belzoni, Miss.—Prices on hot-air furnace and steam-heating furnace for \$12,000 church.

Heating, etc.—William M. Rice Institute, Edgar Odell Lovett, Pres., P. O. Box

Lighting Fixtures, etc.—Treasury Department, Supervising Archt.'s Office, Washington, D. C.—Sealed proposals opened April 20 for conduit and wiring system, lighting fixtures, etc., in U. S. Postoffice, Martinsburg, W. Va., in accordance with drawings and specifications; copies obtainable at office of Archt. and of Custodian, Martinsburg.

Lighting Fixtures.—N. Z. Dewees, Etowah, Tenn.—Prices on electric lighting fixtures for \$8000 library.

Linotype.—The Metter Advertiser, Metter, Ga.—Used linotype.

Locomotive.—Maryland Clay Products Co., Louis N. Rancke, Mgr. and Ch. Engr., Lonaconing, Md.—10-ton motor. (See Electrical Machinery.)

Machine Tools.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until April 11 to furnish saw and dado combination machine, schedule 9434; winding machine, schedule 9437; single cylinder surfacer, schedule 9434; all delivery Norfolk; 30 blowers, schedule 9436, various deliveries; also (date of opening bids not decided) blower, schedule 9457, delivery Puget Sound, Wash.; crank-shaft and steam turbine lathe, schedule 9447, delivery Mare Island, Cal.; beveling machine, schedule 9461, delivery Brooklyn, N. Y.; head planer and horizontal boring, drilling and milling machine, schedule 9447, delivery Mare Island, Cal.

Manufactures.—Juan Francisco Rojas, Calles Pichincha y Luque No. 103, Guayaquil, Ecuador.—To represent manufacturers of matches, stearine candles, cotton goods, wool, thread, lard in barrels, wheat flour,

corn, starch for washing or laundry purposes, glassware, enameled ironware for household purposes; reference, P. C. Tinsley Co., 17 Battery Pl., New York.

Marble.—Rev. C. E. Wren, Huntington, W. Va.—Estimates on large contract for marble for \$100,000 institution and church.

Mining (Coal) Machinery.—The Creek Smokeless Fuel Co., E. C. Taylor, Mgr., Page, W. Va.—Will soon open bids on mining machinery; estimated cost \$200,000 daily capacity mines 2000 tons.

Office Furniture.—See Cement Products Machinery.—Hopewell Brick Corp.

Packing (Meats) Machinery.—Gordon Aronhime, Aronhime Packing Co., Detroit, Va.—Prices on motors, abattoir, refrigerating, sausage, lard and offal-rendering machinery.

Paving.—Dept. of The Interior, Andrews A. Jones, First Asst. Secy., Washington, D. C.—Bids until April 18 to construct driveway crossings, sidewalks, curb and gutters on Gore Blvd., Lawton, Okla.; plans and specifications obtainable from Ch. Clerk of Dept., Washington, or R. P. Sanders, Comm. of Public Property, Lawton.

Paving.—Port Commrs., 405 Realty Bldg., Jacksonville, Fla.—Bids until April 8 to furnish materials (except vitrified paving blocks, wood curbing and sand) to construct not less than 20,000 sq. yds. and not more than 45,000 sq. yds. vitrified paving blocks, and for placing curbing in connection with paving at municipal docks and terminals; bids to be submitted separately for laying paving blocks on edge and on sides, on and foundation, using sand for filler; also for laying blocks on edge and on sides, on and foundation, using cement mortar for filler; plans and specifications on file with J. C. O'Dell, Gen. Mgr., 405 Realty Bldg., Jacksonville.

Paving.—City of Houston, Tex., Ben Campbell, Mayor.—Bids until Feb. 31 to pave following streets with 8 inches of gravel: First—Welch St. from Euclid Ave. to G. H. & S. A. Ry.; Second—Congress Ave. from Velasco to Sampson St., Preston Ave. from Roberts to York St., Roberts St. from Congress Ave. to Harrisburg Blvd., and York St. from Preston Ave. to Harrisburg Blvd.; separate bids on each of two contracts; specifications and information obtainable from E. E. Sands, City Engr.

Paving Blocks.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—30,000 asphalt paving blocks, schedule 940, delivery Washington, D. C.

Paving.—City of Asheville, N. C., F. L. Conder, Secy.—Treasury.—Bids until April 10 to lay 15,000 to 25,000 sq. yds. concrete paving; 10,000 to 20,000 sq. yds. brick, bitulithic, sheet asphalt, asphalt concrete (Topeka specifications), or bituminous macadam, and about 5000 sq. yds. concrete foundations; specifications obtainable office of B. M. Lee, City Engr.

Paving.—Board of Public Works, J. W. Layne, Secy., Lake City, Fla.—Bids until April 17 to pave 21,000 sq. yds. with either modified sheet asphalt or brick, or both, and place 23,000 lin. ft. concrete curb; specifications obtainable for \$1; C. R. Horne, Engr.

Paving.—E. D. Bass, Commr. Dept. of Streets and Sewers, Chattanooga, Tenn.—Bids until April 4 to pave with sheet asphalt Whiteside St. from Main to 28th St. Paving Dist. No. 194; proposal forms, contract and bond furnished on application.

Pipe Machine, etc.—C. C. Penny, 1 S. 20th St., Birmingham, Ala.—2-in. bolt and 6-in. pipe machine.

Plumbing.—See Heating.—William M. Rice Institute.

Porcelain Enamel Finish.—R. J. Grant, 31 Moore Bldg., 10 Auburn Ave., Atlanta, Ga.—Addresses of companies (preferably in the South) that could furnish high-grade porcelain enamel finish to small grinding machine having frame of gray iron castings.

Parchment Paper.—Atwood River Caning Co., Valonia, Ga.—Prices from manufacturers on parchment paper, circles and strips, such as used in packing No. 1 cans shrimp; for immediate shipment, large quantities.

Pumps.—See Boiler, Engine, etc.—Smooth Sand & Gravel Corp.

Pumps.—See Blowers, Pumps, etc.—Bureau Supplies and Accounts.

Riprap and Capstones.—U. S. Engr. Office, Wilmington, N. C.—Bids until April 29 to furnish and deliver about 14,300 tons riprap stone and 1500 tons capstones; further information on application.

Refrigerating Machinery.—See Packing Plant (Meats) Machinery.—Gordon Aronhime.

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Refrigerating.—Fort & Parslow, Curry Bldg., Tampa, Fla.—Prices on machinery for ice-water supply for 40 offices.

Retaining Wall, etc.—Office Board of Purchase, E. R. Conant, Purchasing Officer, Savannah, Ga.—Bids until Apr. 4 to construct concrete retaining wall and extend sewer at foot of W. Broad St.; for further information, plans and specifications address Mr. Conant.

Road Construction.—Lewis County Commrs., Leander Troxell, Clerk, Weston, W. Va.—Bids until April 24 to improve 4 roads leading out of Weston: 5280 ft. Staunton and Parkersburg turnpike; 4350 ft. Weston and Beverly turnpike; 2350 ft. Weston and Gauley Bridge turnpike; 1945 ft. Weston and Clarksburg turnpike; plans and specifications on file with County Clerk.

Road Construction.—Bossier Parish Road Dist. No. 2, official in charge, J. O. Logan, Denton, La., R. F. D. No. 2.—Will open bids April 11 to construct hard roads; \$50,000 and State-aid available.

Road Construction.—Caddo Parish Police Jury, J. T. Bullen, Parish Engr., Shreveport, La.—Will open bids April 13 to construct about 9 mi. and about April 25 on 6 mi. gravel road.

Road Construction.—Chilton County Commrs., Clanton, Ala.—Bids until April 15 to gravel road from Clanton to Lock 12, now being graded by W. T. Taylor; bids to state number of mi. in length to be graveled and charge per cu. yds. for each mile haul; plans and specifications furnished by R. L. Kwan, County Engr.; E. B. Denson, Judge of Probate.

Road Construction.—Dallas County Court of Revenues, Selma, Ala.—Bids until April 17 to clear, grade and gravel road from Safford to Wilcox county line near Alberta on line of proposed Jackson Highway, about 5½ mi.; plans, profiles and specifications on file with W. O. Crisman, County Engr.

Road Macadamizing.—Carter County Road Commrs., Elizabethton, Tenn.—Will open bids April 1 at Courthouse to macadamize about 70 mi. graded roads; contracts to be let as whole or in following units: State Line Rd., Stoney Creek Rd., Watauga Rd., Siam Rd., Memphis to Bristol Highway, Braemar Rd., Gap Creek Rd., Powder Branch Rd.; plans and specifications at office of Chief Engr., Road Commission, Elizabethton; L. D. Gastinger, Secy., Braemar, Tenn.

Road Construction.—Hamblen County Turnpike Commrs., W. D. Bushong, Chrmn., Morristown, Tenn.—Bids until April 1 to grade and macadamize 40 mi. of public highway and streets, to include furnishing of vitrified drain pipe, concrete and stone masonry; plans and specifications obtainable from Henry B. Havelly, Engr., Morristown.

Roofing.—Thomas M. Brownlee, Belzoni, Miss.—Prices on slate and other roofing for church building.

Sales.—Southern Bonding & Realty Co., F. B. Pond, Prest., Asheville, N. C.—Prices on safes.

Saw (Portable Cut-off).—Daniel D. South (address until April 15), West Palm Beach, Fla., care Yacht Trio.—Portable cut-off saw, with 3 or 4 H. P. electric motor or gasoline engine.

Sawmill (Band).—H. T. Ballah, Holston River Lumber Co., Hotel Belmont, Abingdon, Va.—Bids on band mill and accessories; daily capacity 100,000 ft.

Saws.—See Electrical Machinery, etc.—Bureau Supplies and Accounts.

Sewer Construction, etc.—Office Board of Purchase, E. R. Conant, Purchasing Officer, Savannah, Ga.—Bids until Apr. 4 to extend sewer at foot of W. Broad St. and construct concrete retaining wall; for further information address Mr. Conant.

Sewer Construction.—City of Tulsa, Okla.—Bids at office of City Auditor until Mch. 30 to construct sanitary sewer systems in Sewer Dist. Nos. 33, 106 and 104; plans, profiles and specifications on file with T. C. Hughes, City Engr.

Sewer Construction.—Bond Trustees, Gustav Muller, Acting Chrmn., Jacksonville, Fla.—Bids until April 14 to construct 18 mi. sanitary and storm sewers varying from 8 to 34 in.; work divided into 7 sections and bids will be received on each section separately; plans and specifications on file with City Recorder; plans and other information obtainable from L. D. Smoot, Commr. of Public Works, for \$10.

Sewer Construction, etc.—State Roads Commission, O. E. Weller, Chrmn., 601 Garrett Bldg., Baltimore, Md.—Bids until April 11 to construct 2000 lin. ft. sewer with necessary inlets, manholes and connections on

Baltimore county approach to Hanover St. bridge, contract No. BC-17, section 11; also 5000 cu. yds. excavation, contract No. BC-17, section 12; bids to be made on blank form contained in book of specifications; specifications and plans furnished by Commission for \$1.

Sewer Construction Materials.—See Water-works, Electric Light and Sewer Materials.—City of Nashville, N. C.

Sewer Construction, etc.—State Roads Commission, O. E. Weller, Chrmn., 601 Garrett Bldg., Baltimore, Md.—Bids until April 11 to construct 2000 lin. ft. sewer with necessary inlets, manholes and connections on Baltimore county approach to Hanover St. bridge, contract No. BC-17, section 11; also 5000 cu. yds. excavation, contract No. BC-17, section 12; bids to be made on blank form contained in book of specifications; specifications and plans furnished by Commission for \$1.

Sewer Construction.—Board of Commissioners, J. W. Dashiell, Secy., Nashville, Tenn.—Bids until April 4 to construct circular brick trunk sewer from and connecting with Second ward trunk sewer at 21st Ave. to N. Clay and 10th Ave.; plans and specifications on file with City Engr.; Robt. Ewing, Mayor.

Sprinkler (Road Oil).—W. A. Edwards, Gen. Mgr., Ardmore Construction Co., Ardmore, Okla.—Address of manufacturer of road oil sprinkler with attachment to blow dust off street ahead of sprayer.

Steam Plant.—City of Zebulon, N. C., E. C. Daniel, Mayor.—Bids on steam plant. (Will install electric plant, 50 H. P. development.)

Steel Angles, Brass Tubing, etc.—Panama Canal, Earl I. Brown, Gen. Purchasing Officer, Washington, D. C.—Bids until April 13 to furnish steel angles, brass tubing, bronze bars, copper sheathing, yellow metal, copper nails, laundry water heater, ejectors, scrubbing brushes, hand wire brushes, water coolers, glass pitchers, Chinese strainers, aluminum trays, enamelware, knives, spoons, towels, thumb tacks, rubber bands, bond paper, manila rope, and spruce lumber; blanks and general information relating to this circular (No. 1026) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Steel Beams.—City Point Ice Corp., Hopewell, Va.—Several lengths of 32 and 31-ft. 10-in. I beams.

Steel Construction, etc.—Berkeley Woolen Co., Martinsburg, W. Va.—Catalogues and pamphlets from manufacturers or wholesale dealers in steel construction for mill and factory buildings; also ventilators for roofs.

Steel Pipe, Copper Tubing, etc.—Panama Canal, Earl I. Brown, Gen. Purchasing Officer, Washington, D. C.—Bids until April 13 to furnish steel pipe, copper tubing, machine bolts, brass screws, screw eyes, door hooks, cotter pins, door bolts, hinges, screen door catches, drawer locks, fire hose nozzles, grindstones, ladders, coal baskets, pulleys, lamp chimneys, aluminum cooking utensils, mop heads, tool handles, rubber bands and lumber; blanks and general information relating to this circular (No. 1027) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Steel (Tool).—Gustaf Jaatinen, Vasa, Finland.—To represent firm for air self-hardening tool steel.

Ties.—Wilmer Bros., Box 1, Washington, D. C.—100,000 white oak cross-ties; sawn or hewn on 4 sides, 7-in. by 8-in. by 8-ft. 6-in.; sawn or hewn on 2 sides, 7-in. by 7-in. by 8-ft. 6-in.; 150,000 square hewn long-leaf yellow pine heart ties, 7-in. by 9-in. by 8-ft. 6-in. Quote prices f. o. b. cars or steamer at points of loading, stating same, and how many can furnish within next 3 or 4 months.

Tile.—See Building Materials.—D. D. Harrington Co.

Tractor.—Fagan-Peel Co., Waynesboro, Miss.—Traction engine suited to lumber hauling over sand and clay roads.

Tram and Trolley Systems.—Maryland Clay Products Co., Louis N. Rancke, Mgr. and Ch. Engr., Lonaconing, Md.—¾ mi. overhead trolley system; 5 mi. 3-ft. 6-in. tramway.

Trucks (Motor).—See Cement Products Machinery.—Hopewell Brick Corp.

Turbine.—See Water-wheel.—Fagan-Peel Co.

Ventilators (Roof).—See Steel Construction, etc.—Berkeley Woolen Co.

Wagons (Dump).—See Cement Products Machinery.—Hopewell Brick Corp.

Water Mains.—Mayor and Board of Selectmen, McComb, Miss.—Bids until April 18 to lay 1500 ft. 4-in. water mains; L. H. Marsalis, Clerk.

Water Tower.—See Cement Products Machinery.—Hopewell Brick Corp.

Water-wheels, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until April 11 for delivering engine bodies, electrical cable, centers for gyro, and turbine wheels at naval torpedo station, Newport, R. I. Apply for proposals to navy pay office, Newport, or to Bureau.

Water-wheel.—Fagan-Peel Co., Waynesboro, Miss.—Turbine wheel or latest machinery for water-power mill.

Water-works Improvements and Gas Plant.—City of Wilson, N. C., E. F. Killelte, Mayor.—Bids until April 6 (postponed date) to construct water-works improvements and gas plant; includes extension of present brick and concrete (electric power station) building into pump-room and filter building; filter plant, ultimate capacity 3,000,000 gals. daily, part of equipment to be installed at present; concrete coagulating basin, 1,000,000-gal. concrete-lined reservoir, brick and concrete auxiliary raw water pumping station and intake, 14-in. raw water force main 4 mi. long, and other piping; cross compound pumping engine, 2100 G. P. M. capacity, etc.; steel tank and tower; gas work includes brick and concrete building for carburetted water gas apparatus, and equipment for high-pressure distribution, including 12 mi. wrought pipe street mains; will receive separate bids on several sections of work; plans and specifications obtainable from Consult. Engrs. at Wilson; Anderson & Christie of Charlotte, N. C., Consult. Engrs.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Birmingham.—The Birmingham Interurban Development Co., capital \$500, has been incorporated and will immediately make survey from Birmingham via Dora and Cordova to Jasper, Ala., about 35 mi., crossing the Warrior River at the most available point nearest to Birmingham. W. A. Spencer of Wylam, Ala., is Pres.; A. S. Preston of Jasper, V. P., and W. W. Shortridge of Birmingham, Secy. Other incorporators are Geo. B. Tarrant, H. B. McCormack, W. F. Aldrich and Colman Blach of Birmingham; C. I. Jones of Dora; Ed Long and J. H. Bankhead, Jr., of Jasper; E. T. Hendon, G. S. Elliott, Dr. J. M. Miller, P. M. Long and Dr. E. H. Tubb, all of Cordova.

Ala., Fort Payne.—M. M. Elkan of Macon, Ga., has been awarded the contract for 2½ mi. of second track work on the Alabama Great Southern R. R. from Fort Payne to Flanders, Ala. C. Dougherty, Cincinnati, O., is Ch. Engr.

Ark., Yellville.—Grade is reported complete for 6 mi. on the Yellville, Rush & Mineral Belt Ry. now under construction from Yellville to the mouth of Panther Creek on Buffalo River, 19 mi. J. C. Shepherd of Rush, Ark., is Pres.

Ky., Wrigley.—H. M. Collins, W. A. Whiting and associates, who recently bought the Reese-Roper Lumber Co. property in Morgan county, will, it is stated, complete the branch railroad 6 mi. long connecting with Morehead & North Fork R. R. near Wrigley.

Miss., Pelahatchee.—Gammill Lumber Co. is reported to have begun construction of an extension of its lumber railroad to develop newly-purchased timber lands.

Miss., Meridian.—Meridian & Memphis R. R. has completed track into its own terminal at Meridian, and as soon as the extension from Union to Sebastopol, Miss., is finished, construction is expected to begin upon the proposed line eastward from Meridian to Myrtlewood, Ala. S. A. Neville of Meridian is V. P. and Gen. Mgr.

Mo., Kennett.—Paragould.—Memphis R. R. Co. of Kennett is chartered, capital stock

Well-drilling Machinery.—City Point Ice Corp., Hopewell, Va.—Well-drilling machine; second-hand; handle 8-in. wells; send full description and price.

Wharf Construction.—Port Commrs., 407 Realty Bldg., Jacksonville, Fla.—Bids until April 8 to construct marginal wharf, similar to those already constructed along north side of Pier No. 1, from end of present wharf, 30 ft. wide and 699 ft. long, to shore bulkhead; also marginal wharf, similar to those already constructed, 59 ft. wide, from north side of west end of Pier No. 1 along shore bulkhead for 500 ft.; plans, specifications and list of materials on file with J. C. O'Dell, Gen. Mgr., 407 Realty Bldg.

Woodworking Machinery.—Wm. M. Shorter, Buchanan, Va.—Second-hand planers and bandsaws and woodworking machinery generally for building materials.

Woodworking Machinery.—Farrar Lumber Co., Dalton, Ga.—Planing mill machinery as follows. End trimmer with 2 saws for trimming lumber from 8 to 18 ft. long; 24-in. circular resaw; gang rip saw with two saws; watchman's clock; second-hand, in good condition at low price.

Water-works, Electric-light and Sewer Materials.—City of Nashville, N. C., L. T. Vaughn, City Clerk.—Bids until April 7 to furnish machinery and materials for water, electric-light and sewer systems; two 100 H. P. boilers, steel encased; 200 H. P. heater and feed pump; 75 K. V. A. generator and direct-connected uniflow or four-valve engine; 10 K. V. A. street-lighting regulator; two 500 G. P. M. underwriters' steam pumps; 100 G. P. M. motor-driven centrifugal pumps; 60,000-gal. tank on 75 or 100-ft. tower; 80,000 common and 60,000 all-hard brick; 65 tons ½-in. and 150 tons 1-in. concrete stone; 5.5 tons cast-iron specials; 4850 ft. ½-in. galvanized pipe and fittings; 24 fire hydrants; valves and boxes; pig lead; jute; 3 mi. 8 and 10-in. sewer pipe, etc., and sewer castings and siphons; 453 bbls. cement; 10,000 lbs. reinforcing steel; 25 35-ft., 145 30-ft., 14 25-ft. and 15 15-ft. poles; 66,000 ft. No. 8 and 2000 ft. No. 4 T. B. W. P. copper wire; pole line material; 4880 ft. 8-in. and 7840 ft. 6-in. class B cast-iron pipe; drilling 10-in. well; specifications obtainable from J. B. McCrary Co., Engr., Atlanta, Ga.

Wire (Copper).—W. A. Lyle, Dandridge, Tenn.—Prices on about 6 mi. No. 8 bare copper wire.

\$90,000, to build a lumber line 9 mi. long from Cardwell to Geneva, Mo.; incorporators, John W. Vail, C. A. Merryman, John S. Dull and others, of Decatur, Ill., and Cardwell, Mo.

Okla., Tulsa.—The Sand Springs Ry. Co. denies the recent press report that it would build an extension to Pawhuska.

Tex., Dallas.—John T. Witt of Dallas, Ch. Engr., Dallas Northwestern Traction Co., has begun survey at Bowie, Tex., continuing survey made from Dallas to Krum.

Tex., Lometa.—S. W. Fisher of Austin, Tex., is reported interested in plan to build railroad from Lometa to Fredericksburg, Tex., about 75 mi.

Tex., Orange.—Contract is let by the Litcher & Moore Lumber Co. of Orange to Cook & Richards of Crockett, Tex., for a 12-mi. extension of the Gulf, Sabine & Red River R. R., starting near Fields, La., and running northeast. Another contract to continue the extension 16 mi. farther is expected to be let within two weeks.

Tex., San Antonio.—San Antonio Belt & Terminal Railway Co. has made tentative contract for construction of freight and passenger terminals of Missouri, Kansas & Texas Ry., and has asked authority of Texas Railroad Commission to issue \$1,750,000 of notes. C. E. Schaff is receiver of the road, Railway Exchange Bldg., St. Louis.

W. Va., Princeton.—Virginian Ry. Co. will build three spur tracks at Rich Creek, Croy and Toronto, respectively. H. Fernstrom, Norfolk, Va., is Ch. Engr.

W. Va., Wheeling.—Concerning report that the New York Central Lines may build from Wheeling to Dillonvale, O., 29 mi., the company says that it knows nothing of this project.

W. Va., Wyatt.—Western Maryland Ry. Co., H. R. Pratt, Ch. Engr., Baltimore, has let contract to the Miller Construction Co. of Lock Haven, Pa., to build the Fairmont-Binghamon Ry. from Hutchinson, on the Baltimore & Ohio R. R., to Wyatt, 8 mi. up Binghamon Creek. Work is to begin as soon as men and materials can be assembled.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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JNO. B. RAMSAY, V.-P. and Chm. Bd. of Dir.
JOHN B. H. DUNN, Cashier.
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Surplus and Profits \$2,175,000.
Accounts of Banks, Bankers, Corporations and Individuals solicited.
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Capital \$300,000 Established 1870
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And the general principles involved in the selection of such investments are contained in a very comprehensive treatise which we will send gratis to those who have charge of trust funds and who apply on their letter heads for Investment Treatise No. AG-173.

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INCORPORATING under broad, liberal, safe and stable Delaware laws. A fully equipped department for proper organization and registration of corporations.
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STREET RAILWAYS

Tex., Corpus Christi.—Corpus Christi Traction Co., it is announced, has accepted franchise granted J. H. Caswell and others and will build the proposed electric railway from Corpus Christi to Wards Island, 8 mi. J. H. Caswell and W. E. Pope, the latter Secy.-Treas. of the company, will direct construction, which is expected to start within a month.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

FINANCIAL CORPORATIONS

Ark., Everton.—The Bank of North Arkansas, capital \$10,000, is chartered. A. A. Bradley is Pres.; A. W. Bonner, V.-P., and S. H. Kunau, Cash.

Fla., Hastings.—Hastings Banking Co. has changed its name to the Bank of Hastings; capital \$15,000.

Ga., Atlanta.—A new bank to be located at Marietta St. and Bellwood Ave. is organized with \$25,000 capital. Dr. W. B. Chandler, Pres.; H. B. Davis, V.-P., and E. M. Looney, Cash.

Ga., Macon.—A Morris Plan bank is being organized by A. E. Chappell, J. Clay Murphy, B. P. O'Neal, H. L. Barfield, S. T. Coleman, John C. Walker, R. J. Taylor, Maitland Solomon and others.

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Ky., Paducah.—Ohio Valley Trust Co., capital \$50,000, with privilege of increasing to \$200,000, is organized by F. M. Fisher and associates.

MD., Baltimore.—The Continental Co., authorized capital \$500,000, is organized to do an investment business. Directors will be Gilbert B. Bogart, New York, Pres.; Walter S. Brinkmann, Baltimore, V.-P.; John W. Dickey, Augusta, Ga.; W. J. Casey and Sidney Lansburgh, Baltimore. George Thomas will be Secy. and Treas. Offices will be in the Continental Trust Bldg.

Miss., Greenwood.—A new bank is reported being organized by J. B. Starling of Jackson and S. C. Bull of Brookhaven.

N. C., Asheville.—Southern Bonding & Realty Co. chartered and inceptd., capital \$50,000. Directors: F. B. Pond, Pres.; R. W. Pond, V.-P.; G. E. Thoma, Secy., and J. W. Behen, Treas. Business is to begin immediately.

N. C., Bridgeton.—T. W. Holton and Dr. B. B. Smith propose organizing a bank.

N. C., Fayetteville.—A building and loan association is organized with Dr. J. V. McCougan, Pres.; A. B. McMillan, V.-P., and Thomas H. Sutton, Secy. and Treas.

N. C., Fayetteville.—Home Building and Loan Association will begin business April 1 with Dr. J. Vance McGougan, Pres.; A. B. McMillan, V.-P.; Thomas H. Sutton, Secy. and Treas.

N. C., Gates.—Citizen's Bank chartered, capital \$10,000; will begin business about Sept. 1. Directors: R. W. Gatling, Pres.; G. R. Eure, R. W. Hayes, H. P. Langston, D. W. Langston, Geo. Gardner and I. A. Hines, Gates; G. D. Gatling, Roduco, and T. V. Arthur, Whaleyville, Va.

N. C., Hamlet.—First National Bank of Hamlet, capital \$25,000, is organized with E. N. Rhoades, Pres.; E. F. Powell, V.-P., and Noah H. Jenette, Cash.

Okla., Muskogee.—Realty & Live Stock Investment Co., Flynn-Ames Bldg., Muskogee, P. O. Box 664, is inceptd.; capital \$50,000. Harry Smith, Pres.; Bert E. Nussbaum, Secy. and Treas., and J. N. Wilkerson, V.-P. Business is to begin immediately.

Okla., Oklahoma City.—Camel Investment Co., capital \$10,000, is inceptd. by R. B. Taylor, L. M. Taylor, Oklahoma City; H. J. Bolton and L. D. Bolton of Wharton, Tex.

Okla., Tulsa.—Tulsa Union Loan & Savings Association is organized, with E. W. Shearer, Pres.; James E. Wade, F. A. Hays and T. J. Hartman, V.-Ps.; Mark E. Gitt, Treas., and C. F. Bruce, Secy.

S. C., Bowman.—People's Bank of Bowman chartered; capital \$15,000; T. Y. Easton, Pres.; G. E. Stroman, V.-P.; R. L. Patrick, Cash.

S. C., Columbia.—Hanover Investment Co. chartered and incorporated, capital \$50,000. Directors: C. T. Graydon, Pres.; W. E. M. Nulty, Secy.-Treas., and Aaron Daird. Business is to begin immediately.

S. C., Saluda.—Bank of Saluda is chartered; capital \$25,000. B. W. Crouch, Pres.; M. A. Coleman, V.-P.; W. A. Crouch, Secy., and J. P. Lindler, Cash.

Tenn., Smithville.—People's Bank is inceptd. to succeed the People's Bank & Trust Co., capital \$50,000. Business is to begin about Apr. 1.

Tex., Dallas.—Provident Assurance Society of Dalworth is organized to do an insurance business; S. P. Rice, Pres.; R. L. Cook, V.-P.; W. B. Valentine, Secy.-Treas., and W. A. Parker, Asst. Secy.-Treas. Temporary headquarters are at 1807 Busch Bldg.

Tex., Hansford.—First National Bank, capital \$25,000, has made application for charter.
Va., Craigsville.—Bank of Craigsville, capital \$20,000 to \$25,000, is inceptd. by W. S. Johnson, Pres.; Craigsville; J. L. Hankins, V.-P.; Fordwick, and Oliver Brown, Secy. and Cash., Craigsville.

NEW SECURITIES

Ala., Birmingham.—\$221,377.79 Jefferson county warrants have been purchased by Otto Marx & Co., Birmingham.

Ala., Collinsville.—\$10,000 20-year school bonds are voted. J. T. Bartlett is Mayor.

Ala., Hurlbore.—\$8000 5 per cent. 20-year water and light bonds have been purchased by Sidney Spitzer & Co., Toledo, O.

Ark., Wynne.—\$150,000 bonds Bayou Devlew Drainage Dist. have been purchased at \$346.75 premium by Judge Jas. Gould of Pine Bluff, Ark.

Fla., Bartow.—Election is to be held in Polk county in May to vote on road bonds. Address County Commrs.

Fla., Coldwater.—Election is to be held

April 4 to vote on \$15,000 school bonds. S. D. Wooten is Mayor.

Fla., De Land.—\$350,000 6 per cent. De Land-Lake Helen special road and bridge bonds, Volusia county, have been purchased at \$21.050 premium and accrued interest by Bolger, Mosser & Willaman of Chicago.

Fla., Fort Meade.—\$7000 5 per cent. 30-year \$1000 denomination paving bonds have been purchased by the Southern Clay Mfg. Co. Address W. B. Gardner.

Fla., Fort Lauderdale.—\$92,500 of an issue of \$165,000 6 per cent. \$500 and \$1000 denomination Broward county road and bridge bonds have been purchased by F. L. Fuller Co., Cleveland, O., at \$89.725. Frank A. Bryon is County Clk.

Fla., Fort Lauderdale.—\$175,000 bonds Special Road and Bridge Dist., Broward county,

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will soon be placed on the market. A. B. Lowe is Chmn. Board County Commrs. and Frank A. Bryan Clerk.

Fla., Fort Lauderdale.—\$170,000 bonds Special Road and Bridge Dist. No. 2, Broward county, are voted. Address County Commrs.

Fla., Kissimmee.—Election to vote on \$250,000 road and bridge bonds Commrs. Dist. 1, 2, 3, 4 and 5, Osceola county, will be held April 15. Address County Commrs.

Fla., Lake City.—\$79,000 5 per cent. \$1000 denomination refunding and city hall bonds have been purchased at par, plus accrued interest and \$2014.50 premium, by W. L. Slayton & Co., Toledo, O. G. A. Bule is Chmn. Board of Public Works.

Fla., Sanford.—Bids will be received until 3 P. M. April 20 for \$250,000 5½ per cent. Seminole county refunding and highway bonds, dated July 1, 1915, and maturing July 1, 1945; denomination \$1000. E. A. Douglas is Clerk Board County Commrs.

Fla., Sebring.—Election is to be held May 12 to vote on bonds. Owing to technicality, previous bond election was declared void. Geo. H. Dalgely is Town Clerk.

Fla., Titusville.—\$150,000 school bonds Second and Third Dist., Brevard county, are voted. Address County Commrs.

Fla., Titusville.—Election to vote on about \$40,000 Second Dist. (Merritts Island Dist.) bridge bonds will be held about June 1. S. A. Asteen is County Commr.

Ga., Athens.—Election is to be held Apr. 29 to vote on \$10,000 4½ per cent. 1-30-year \$1000 denomination water-works extension bonds. Bids for same are now being received. R. O. Arnold is Mayor.

Ga., Hogansville.—April 12 following bonds will be voted on: \$10,000 5½ per cent. \$1000 denomination sewer bonds, dated July 1, 1916, and maturing Jan. 1, 1936, and one bond annually thereafter; also for \$25,000 5 per cent. water-works bonds, dated July 1, 1916, and maturing Jan. 1, 1921, and \$1000 annually thereafter. R. H. Utting is Clerk of Council.

Ga., Leesburg.—\$50,000 courthouse and \$30,000 road improvement, Lee county, bonds are voted. Address County Commrs.

Ky., Ashland.—\$8047.02 6 per cent. bonds have been purchased at par and interest by Hunt-Forbes Construction Co.

Ky., Jamestown.—\$40,000 5 per cent. 5-25-year Russell county road and bridge bonds will be sold on April 6 by Commr. R. E. Lloyd. Denominations \$100, \$500 and \$1000.

Ky., Madisonville.—\$1300 6 per cent. 5-10-year \$100 denomination street and sewer bonds have been purchased at par by W. J. Dulin, Madisonville. D. W. Gatlin is Mayor.

Ky., Milburn.—\$2000 street-improvement bonds are voted. Address The Mayor.

Ky., Providence.—\$15,000 school bonds are voted. Address Board of Education.

La., Boyce.—Election will probably be called to vote on levee system bonds. Address The Mayor.

La., Crowley.—Election is to be held in Fourth Ward Drainage Dist. (Prairie Hayes), Acadia parish, to vote on \$100,000 bonds. Address Police Jury, Acadia parish.

La., New Iberia.—\$90,000 5 per cent. 1-40-year bonds First Sewerage Dist. of New Iberia have been purchased by the Hibernia Bank & Trust Co. of New Orleans for \$90,370.

La., Shreveport.—Election is to be held in Dist. No. 1, Caddo county, Apr. 25 to vote on \$150,000 5 per cent. 1-15-year school bonds. Address Board of School Directors, Caddo parish, Randolph Hunt, Pres.

Md., Baltimore.—Bill has been introduced in the Legislature authorizing issue of \$1,000,000 bonds, \$1,000,000 being for public school buildings, \$2,000,000 to improve streets and sidewalks in Annex, and \$1,000,000 for electric system. J. H. Preston is Mayor.

Md., Cumberland.—\$60,000 4½ per cent. \$1000 denomination bridge bonds are voted. Date for opening bids not yet decided. A. W. Straub is City Clerk.

Md., Easton.—Bill is before Legislature providing for bond issue for bridges in Talbot county. Address County Commrs.

Md., Frostburg.—Bill is to be introduced in the Legislature providing for issue of \$300,000 bonds. Address The Mayor.

Md., Grantsville.—Bill has been introduced in the Legislature providing for issue of bonds for sewerage construction. Address The Mayor.

Md., La Plata.—Bill has been introduced in the Legislature authorizing Charles county to issue road bonds. Address County Commrs.

Md., Woodsboro.—Election will probably be held in May to vote on \$10,000 improvement bonds. Bill is now before the Legislature. Address Town Commrs.

Md., Westernport.—The bill before the Legislature authorizes issue of \$20,000 5 per cent. 25-year \$500 denomination bonds for paying off indebtedness of town and new jailroom. Harry F. Smith is Mayor and O. H. Bruce Clerk.

Md., Westminster.—Bill is before the Legislature authorizing issue of \$30,000 Carroll county road bonds. Address County Commrs.

Mo., Carthage.—Bids will be received until Apr. 10 for \$90,000 4 per cent. 10-20-year \$500 denomination school bonds voted Mch. 14. Address W. F. Moring. J. H. Staley is Mayor.

Mo., Hume.—Election is to be held Apr. 4 to vote on \$30,000 Hume Dist. school-building bonds. Address Board of Trustees.

Mo., Marshfield.—Bids will be received until noon Apr. 3 for \$11,500 5 per cent. Marshfield School Dist., Webster county, school bonds. Dated June 1, 1916; maturity June 1, 1926, to June 1, 1936. Denomination \$500. Chas. M. James is Secy. School Board.

Mo., Moberly.—Bids received until noon Mch. 30 for \$100,000 5 per cent. 10-20-year \$500 denomination school building bonds; Robert L. Kingsbury is Secy. Board of Trustees, Moberly School Dist., Randolph county.

Mo., Monett.—Election is to be held Apr. 18 to vote on \$60,000 bonds Monett Special Road Dist. W. H. Fly is Commr.

Mo., Mount Vernon.—\$60,000 Aurora Special Road Dist., Lawrence county, bonds are voted. Address County Commrs.

N. C., Durham.—Election is to be held in Durham county Apr. 29 to vote on \$150,000 Durham township and \$15,000 Patterson township bonds in aid of interurban railway. Bonds will be 30-year 5 per cents. Address County Commrs., M. G. Markham, Clk.

N. C., Kinston.—Bids will be received until 7.30 P. M. April 3 for \$150,000 1-10-year serial and \$125,000 5 per cent. 30-year improvement bonds. Address W. B. Coleman, City Clerk.

N. C., Reidsville.—\$20,000 5 per cent. 20-year school bonds are voted. Denomination \$1000. Date for opening bids not yet decided. Address W. C. Harris, Secy. Board School Commrs.

N. C., Shelby.—Election is to be held April 29 to vote on \$30,000 6 per cent. No. 5 township, Cleveland county, road bonds. Address County Commrs.

N. C., Tarboro.—Bids will be received until 9 P. M. May 8 by J. H. Jacobs, Town Clerk, for \$30,000 5 per cent. 30-year water and light bonds.

Okla., Alva.—Steps are to be taken to call an election to vote on \$65,000 school building bonds. Address Board of Education.

Okla., Atoka.—Election will probably be called to vote on \$35,000 school bonds. Address School Board.

Okla., Blackwell.—\$10,000 school bonds are voted. Address Board of Education.

Okla., Blackwell.—Election is to be called to vote on \$60,000 water, electric light and sewer bonds. Address The Mayor.

Okla., Calumet.—School bonds have been voted. Address Board of Education.

Okla., Delhi.—Election is to be held Apr. 11 to vote on road bonds. Address The Mayor.

Okla., Dewar.—Petitions are being circulated asking that an election be called to vote on \$20,000 school building bonds. Address Board of Education.

Okla., Dewey.—Question is under consideration to issue street improvement bonds. Address The Mayor.

Okla., Edmond.—Election will probably be called to vote on \$20,000 school bonds. Address Board of Education.

Okla., Frederick.—Plans are being made to call election to vote on bonds for fire department equipment. Address The Mayor.

Okla., Geary.—Question of calling election to vote on sewer bonds is under consideration. Address The Mayor.

Okla., Henryetta.—Election is to be called to vote on \$40,000 school building bonds. Address School Board.

Okla., Holdenville.—Question of calling an election to vote on bonds for courthouse and jail is under consideration. Address The Mayor.

Okla., Hooker.—Election will probably be called to vote on electric-light plant bonds. Address The Mayor.

Okla., Norman.—\$40,000 5 per cent. \$1000 denomination school bonds, dated Apr. 1, 1916, and maturing April 1, 1921, to April 1, 1941, inclusive, have been purchased by Geo. I. Gilbert, Oklahoma City, Okla., at \$40,295.

Okla., Okmulgee.—\$150,000 5 per cent. Okmulgee county courthouse and jail bonds,

recently voted, are to be put on the market in the near future. Address W. P. Norton.

Okla., Okmulgee.—Election is to be held April 4 to vote on \$40,000 bonds for bridges and fire department. Address The Mayor.

Okla., Tahleah.—Question of issuing \$500,000 road bonds is being considered. Address The Mayor.

S. C., Columbia.—Petitions are being circulated providing for an election to vote on \$20,000 bonds Olympia School Dist. No. 4, Richland county. Address County Commrs.

S. C., Ninety-six.—Election is to be held Mch. 31 to vote on \$15,000 electric-light bonds. W. W. Gaines is Mayor and W. B. Jeter, Clerk and Treas.

S. C., St. George.—\$15,000 water-works and \$5000 electric-light bonds are voted. Address The Mayor.

S. C., Union.—\$250,000 Union county road bonds to be voted on April 11 are 5 per cents. J. T. Jeter is County Supvr.

Tenn., Ashland City.—\$150,000 Cheatham county road bonds defeated.

Tenn., Chattanooga.—Bids will be received until Apr. 1, 1916, by Jesse M. Littleton, Mayor, for \$2206.48 6 per cent. 1-4-year bonds Paving Dist. No. 180.

Tenn., Harriman.—Election is to be held May 6 to vote on \$50,000 \$100 denomination school bonds. Address Board of Education, R. R. Davis, Secy.

Tenn., Jackson.—Election is to be called to vote on sewer bonds. Address The Mayor.

Tenn., Newport.—\$25,000 sidewalk, water, street and light bonds have been purchased by Spitzer & Torick, bankers, Toledo. G. F. Smith is Mayor.

Tenn., Sweetwater.—\$325,000 5 per cent. 25-35-year road bonds were voted Mch. 1. Denomination not less than \$100 nor more than \$1000. \$150,000 of the amount will soon be offered and the balance sold as needed. Officials who will have charge of sale of bonds will be elected by County Court Apr. 3.

Tex., Austin.—The Attorney-General has approved the following securities: \$10,000 5 per cent. 5-40-year Jewett Independent School Dist. schoolhouse bonds; \$180,000 drainage, \$25,000 park and \$6000 incinerator 5 per cent. Port Arthur bonds; \$100,000 5 per cent. 10-40-year Brownsville Independent School Dist.; \$17,500 5 per cent. 10-40-year bonds Menardville Independent School Dist.; \$7500 5 per cent. 1-34-year Bonham street-improvement bonds; \$100,000 5½ per cent. 20-30-year bonds Montgomery County Road Dist. No. 2.

Tex., Beeville.—Petition is being circulated authorizing Skidmore School Dist., Bee county, to hold an election to vote on \$7000 school bonds. Address County Commrs.

Tex., Corpus Christi.—Election is to be held April 22 to vote on \$10,000 bonds Road Dist. No. 9, Nueces county. Address County Commrs.

Tex., Georgetown.—Hutto precinct, Williamson county, has voted \$50,000 road bonds. Address County Commrs.

Tex., Gonzales.—\$7000 bonds Cost Common School Dist. No. 22, Gonzales county, are voted. Address Board of Trustees.

Tex., Mount Pleasant.—\$220,000 bonds Road Dist. 1 and 2, Titus county, have been purchased at \$1148 premium by the United States Bond & Mortgage Co. of Dallas.

Tex., Quitman.—Election is to be held Apr. 20 to vote on \$240,000 bonds Road Dist. No. 2, Wood county. Address County Commrs.

Tex., Seadrift.—Question of calling election to vote on water-works bonds is under consideration. Address The Mayor.

Tex., Smithville.—\$17,304 6 per cent. 1-17-year warrants, dated Mch. 1, have been purchased by J. L. Arlitt, Austin, Tex.

Tex., Skinner.—Election is to be held Apr. 18 to vote on \$12,000 electric-light-plant bonds. Address The Mayor.

Tex., Waco.—Election is to be held Apr. 1 to vote on \$2000 Battle School Dist. and \$4500 Hallsburg School Dist., McLennan county, bonds. Address Board of Trustees.

Va., Christiansburg.—\$100,000 4½ per cent. 5-30-year Montgomery county road bonds are to be offered for sale. Address Board of Supvrs.

Va., Harrisonburg.—\$95,000 road-improvement bonds Stonewall Dist., Rockingham county, defeated.

Va., Petersburg.—Bids will be received until 4.30 P. M. April 12 for \$140,000 4½ per cent. public high school bonds; also for \$60,000 46 per cent. grammar school bonds; dated June 1, 1916, and running 40 years straight. Address G. B. Gill, City Auditor. Further

particulars will be found in the advertising columns.

Va., Princess Anne.—Election will probably be called to vote on \$150,000 road bonds Kempsville Dist., Princess Anne county. Address County Commrs.

Va., Rustburg.—Seneca Dist., Campbell county, will soon ask Circuit Court to call a special election to vote on \$40,000 road improvement bonds. Address County Commissioners.

Va., Rustburg.—Election to vote on \$200,000 Brookville Magisterial Dist., Campbell county, road bonds will be held April 15 and not April 25 as previously reported. R. C. Goggin is Clerk.

Va., Spotsylvania.—Bids received until 2 P. M. Mch. 30 by Board Supervisors Spotsylvania County for \$13,000 Berkley Dist. road bonds and \$5000 Livingston Dist. road bonds; they are 5-34-year 5 per cents in denomination of \$100 or multiple thereof; R. T. Powell is County Atty.

W. Va., Cameron.—\$30,000 water-works bonds are voted. Address The Mayor.

W. Va., Eldray (P. O. Marlinton).—The election called for April 8 is not for purpose of issuing bonds, but for establishing a district high school by levy of taxes. G. W. Sharp is Secy. Board of Education. (Previously noted.)

W. Va., Elkins.—\$230,000 5 per cent. 10-year Leadsburg Dist., Randolph county, road improvement bonds are voted. Denomination \$100 to \$500. Address County Court.

W. Va., Fairmont.—\$360,000 Paw Paw Dist., Marion county, road-improvement bonds defeated.

W. Va., Lewisburg.—\$30,000 5 per cent. 10-20-year \$1000 denomination Fort Spring Dist., Greenbrier county, school bonds are voted, dated Apr. 15, 1916, and maturing Apr. 15, 1946. The State of West Virginia has first option on all bonds. If State does not buy, they must be advertised four weeks and sold at public sale. J. W. DeVeber is Pres. Board of Education, and L. E. Kramer, Secy., of Fort Springs Dist.

W. Va., Moundsville.—\$150,000 5 per cent. Union Dist., Marshall county, road bonds have been purchased by Hayden, Miller & Co., Cleveland, O., at par and accrued interest and \$1325 premium.

W. Va., Ransom.—\$8000 of an issue of \$10,000 6 per cent. 10-34-year \$500 denomination bonds for municipal building purchase, street improvements, etc., have been purchased by F. L. Fuller Co., Cleveland, O., at \$834 and accrued interest; dated Jan. 1, 1916. Chas. H. Smith is Recorder.

W. Va., Spencer.—Election to vote on \$30,000 Spencer Dist., Boone county, bonds will be held April 8. N. A. Carpenter is City County Commrs.

W. Va., West Union.—Bids will be received until 1 P. M. Apr. 28 for \$300,000 5 per cent. West Union Dist., Doddridge county, road bonds. Denominations \$100, \$500 and \$1000. Maturity Apr. 15, 1921, to Apr. 15, 1950, inclusive. Hiram Hutson is County Clerk. Further particulars will be found in the advertising columns.

Book Review.

West Virginia Geological Survey of Lewis and Gilmer Counties, with topographic and geologic maps separate. By David B. Reger, assistant geologist, and I. C. White, State geologist. Published by the West Virginia Geological Survey, Morgantown, W. Va. Clothbound. 600 pages. Price \$2; extra copies of geologic map, \$1 each; of topographic, 50 cents.

In accordance with its plan to publish reports on counties from time to time, the survey has issued this volume. Short industrial and historical sketches of the region treated are contained in the book, a chapter on physiography, seven chapters on geology, three chapters on mineral resources and a chapter on paleontology. An exhaustive report on the entire region system was deemed necessary by the author for the technical man considering mineral development in the territory covered by the report. Both of these considerations lie within the coal, oil and gas belt of the State, and the economic geology and structural map of both are considered by the State Survey to possess great value.

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MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Placing Concrete With Portable Mixer.

The practicability of using small concrete mixers in large foundation work was demonstrated in the construction of the foundations for the new building of the Methodist Book Concern now nearing completion at Rush and Superior streets, Chicago, designed to house the publication department of the Methodist Episcopal Church in that district. The building is of reinforced concrete construction throughout, and occupies a ground area 125 feet square, extended 17 feet beyond the building line on one street and 20 feet on the other. The exterior of the building on the first floor is faced with Bedford stone, and above with Hytex Rustico brick, manufactured by the Hydraulic Press Brick Co., St. Louis, Mo. A basement 12 feet 6 inches deep is provided to allow clearance for large presses. The foundation walls and piling caps required a large amount of concrete for

the mixing of which the contractor, Abraham Lund Company, Chicago, used two one-half-yard Standard low-charging mixers, made by the Standard Scale & Supply Co., Pittsburgh and Chicago. The illustration herewith shows one of the mixers in operation. The easy portability enabled them to be readily moved along the work on the two street and the alley sides of the building, and the depth of the basement permitted the spouting of concrete a considerable distance. By moving the mixers along the sides of the job all of the concrete in the retaining walls on the streets and alley and a considerable part of the concrete of the inner retaining wall was spouted from the mixers directly into the forms. In this manner the concrete of two rows of pier footings on the two street sides and three rows of footings on the alley side was spouted direct from the mixers. The remainder was spouted into bins placed in the most advantageous positions, and carted comparatively short distances to the forms. It is estimated that fully three-fourths of the large quantity of concrete was spouted direct from mixers to forms, not only making the work more rapid, but reducing the cost of construction, it is said. The architects were Wheelock & Shank, Chicago; the engineer, Ramsey Engineering Co., also of Chicago.



STANDARD PORTABLE CONCRETE MIXER ON LARGE JOB.

wheel of the truck. As the speed of the truck increases or diminishes the governor correspondingly increases or



DISTRIBUTOR OF ROAD BINDERS.

diminishes the quantity of air and the opening of the valve is governed accordingly, to a high degree of accu-



THE NEW WORM-DRIVE 1 1/2-TON KELLY-SPRINGFIELD TRUCK.

racy, it is claimed, the result being stated as a very uniform distribution of oil, one of the most important features of road binding. Without interfering with the automatic control, manual control can be applied to change the quantity of oil passed through any one or all nozzles, which is desirable in increasing the quantity in places where the wear is particularly heavy. An indicator is attached to each valve stem to show the opening of the valve. The quantity of oil per square yard being applied is registered by means of an oil meter and a speedometer, so that the distribution can be governed within 1 per cent. of the desired quantity, it is said.

Light Worm Driven Models Added to Kelly Line.

One and a half and two-ton models of Kelly-Springfield trucks are now furnished with worm drive as well as chain drive. This addition to the Kelly line of one to six-ton, 110-inch to 208-inch wheelbase trucks, was made, as stated by the manufacturer, the Kelly-Springfield Motor Truck Co., Springfield, O., after years of study and research by the company's engineers, and was incorporated in the stock design only after the experimental stage had been passed.

As the distinguishing feature the worm drive axle is of especial interest. The worm and gear are made for the truck company by the Timken-David Brown Company, who have had extensive experience in the manufacture of this class of article. They are mounted in a substantial steel housing, which, in addition to acting as an oil reservoir, carries the load of the truck. The worm is of the straight type, mounted above the gear, and is hardened and ground. The gear is made from bronze said to be very close-grained and tough, cut by special hobs to insure absolute accuracy to the teeth. The axle shafts that carry the fixed hub on the outer end are made on liberal proportions capable of carrying a reasonable overload and withstanding the shocks of the road. Heat-treated alloy steel prepared to give great strength is used in these. The radius rods are intended to take the driving stress and the torque reaction to be taken by the springs. This construction is said to furnish a flexible drive, cushioning the shock of starting and braking and at the same time to prevent any tendency of the springs to creep on their seat. The entire axle is designed for ruggedness and strength, allowances having been made for overloads and care taken that lubrication should be liberal and certain.

Other Kelly features of prominence are the left drive, center control, flexibility of the frame, the adaptability of the chassis by which secondary power can be taken off for the operation of special equipment, the accessibility of all parts, the electric lighting and starting equipment, the company's ability to furnish the lighter models in either chain or worm drive.

Uniform Distribution of Road Binder.

A machine has been put on the market by the Uniform Asphalt Distributor Co., Meridian, Miss., controlled in Alabama and Florida by the Good Roads Construction Co., Heard Building, Jacksonville, Fla., that it is claimed will successfully apply any oil that can be made liquid, at practically the same labor cost as applying the very lightest materials, thus enabling a more general use of the heavier asphaltic road binders, use of which has been restricted by the expense of applying them by hand. The machine is mounted on a spring truck, and weighs complete about 3000 pounds. In operation the truck is attached to the rear of the oil tank wagon and connection made from the machine to the oil tank with a four-inch flexible metal hose.

Compressed air, generated by a gasoline motor-driven compressor, operates the mechanism. Light air pressure is used to bring the oil from the tank to the distributor. Distribution is effected by means of the compressed air through four atomizing nozzles, each covering two feet of road surface. The air on the way to the

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Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Southern Office Removed.

The United States Cast Iron Pipe & Foundry Co., Burlington, N. J., announces the removal of its Southern sales and traffic office from Chattanooga, Tenn., to 1002 American Trust and Savings Bank Bldg., Birmingham, Ala., effective April 1.

Storage Battery Office Removes.

On April 1 the St. Louis office of the Electric Storage Battery Co., Philadelphia, will be moved from the Fullerton Bldg. to 1508 Federal Reserve Bank Bldg. The change has been necessitated by an increase of business in the St. Louis territory, causing a demand for larger quarters.

Refrigeration Installations.

Of the 77 installations of refrigeration units or parts noted in the report of work from February 29 to March 20 by the York Manufacturing Co., York, Pa., eight are in the Southern States of Missouri, Texas, Tennessee, Alabama and West Virginia. The Southern installations consist of vertical, single-acting, belt-driven, enclosed type refrigerating machines of from 2 to 20 tons capacity, with high-pressure sides, complete.

Packard Trucks and Recruits for Mexico.

A trainload of 27 Packard trucks and 30 recruit drivers from the Packard plant was dispatched on March 21 by the Packard Motor Car Co., Detroit, in less than 22 hours after receipt by that company of an order from the Government for the equipment mentioned, to serve in the transport branch of the Mexican punitive expedition. The train of 14 steel freight cars and one Pullman was given a clear right of way and rushed through to the Mexican border in the fastest possible time. Fully a thousand of the company's employees volunteered for the service.

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Salesmen's Reunion.

Every department of the sales force of the B. F. Goodrich Company, Akron, O., was represented in the two days' conference recently held by the company for its 450 salesmen east of the Rocky Mountains. Sales problems and policies were subordinated in the subject of promoting a closer brotherhood between the salesmen themselves and between them and the company. A tour of inspection of the plant and addresses by officers of the company were special features, a note of promised future prosperity for the company being sounded as expression of confidence that the increase in business that necessitated the recent addition of 700,000 square feet of floor space to the plant will be sustained.

LaBelle Iron Profits Large.

Net earnings of the LaBelle Iron Works at Wheeling, W. Va., for 1915, were \$1,351,000, as shown in reports submitted at the annual meeting of stockholders recently held in Wheeling. During the first half of the year production was very slack, but rallied later, causing a record rate of output. Many additions and improvements to the plant were started during the year, among the former being a plant consisting of 94 12½-ton Koppers regenerative by-product coke ovens, having a daily capacity of 1000 tons, designed for the recovery of gas, tar, sulphur of ammonia and light oil; a benzol plant for the recovery of benzol, toluol and solvent naphtha. Both are expected to be put in operation the third quarter of 1916. A steel and brick structural repair shop equipped with bending rolls, double punch and shear and drill press and a locomotive repair shop were also added. Four per cent. dividend was paid on preferred stock.

TRADE LITERATURE

Prevention of Pipe Corrosion.

A paper by F. N. Speller on "The Prevention of Corrosion in Pipe" has been incorporated in a pamphlet and issued by the National Tube Co., Frick Bldg., Pittsburgh, Pa. It represents the result of research work and investigation on the life of pipe and contains suggestions as to how such life may be prolonged.

Road News.

The Highway Magazine, published monthly "in the interest of good roads" by the American Rolling Mill Co., Middletown, O., contains many interesting miscellaneous items and articles in the March issue relating to highway development and use. The many uses of Armco American ingot iron culverts in connection with road building are shown.

Pumps and Hay Tools.

Catalogue No. SP-16, with price list of Myers bucket and barrel, hand and power spray pumps and rigs, hose, nozzles, fittings and fixtures, and hay tools, has been issued by F. E. Myers & Bro., Ashland, O. By comparisons of fruit grown with and without spraying, the advantage of spraying is shown.

[Continued on Page 77.]

CONVERSE COLLEGE

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Is one of the only six women's colleges in the South honored by membership as a standard college in "The Association of Colleges and Preparatory Schools of the Southern States." Its B. A. degree is accepted by the highest grade Colleges and Universities and admits, without further work, to candidacy for the M. A. degree. It has separate science, music, and library buildings; dormitories limited to 190; gymnasium and infirmary; 42-acre campus; and 38 teachers and officers. It is thirty-five miles from the Blue Ridge mountains, and has an ideal winter climate. It owes no debts, and has an endowment. It is accessible North, East, South, and West by six lines of railway. If you wish a catalogue, address

ROBT. P. PELL, Litt. D., President Spartanburg, S. C.

Shipping Oil by Carload from Alta Vista Field, Near San Antonio.

J. B. CARRINGTON, Secretary Chamber of Commerce, San Antonio, Tex.

San Antonio now has a proven oil field, with prospects of a still further development until a basis of decided commercial and industrial importance is reached. The experimental stage was passed when the Fuchs well, in the Alta Vista oil field, eight miles south of San Antonio, came in with a 300-barrel flow. It is a low-gravity oil, but fuel oil of remarkable combustion, taking less to generate steam than the ordinary fuel oil.

On March 18 a 600-barrel well was brought in by Raborn & Dingman. It is about 350 feet from the Fuchs oil well, and when it made its first head flowed at the rate of from 800 to 1000 barrels per day. In an effort to drill this well deeper water broke into it and the gas pressure was too strong to go further. When the tubing was set it was found that the trouble had come from a two-foot cave-in. The well was cleaned and a liner set, and pumping through a three-inch tubing the well is now producing a solid stream of oil estimated by the head driller at about 600 barrels of oil per day. Raborn & Dingman, owners of the well, are drilling a third well on the Jesse Oppenheimer tract, and are now down about 800 feet.

A pipe line has been completed from the wells to the San Antonio, Uvalde & Gulf Railway, a distance of 4100 feet, and oil shipments will average a car daily. Mr. Dingman predicts that this output will be doubled almost immediately. Prices for this oil range from \$1 to \$1.10, according to grade. In order to supply the demand of local manufacturers for fuel oil, 10 tank

wagons are operating day and night from the Alta Vista field.

The first prospecting in the Alta Vista field was done in the summer of 1915. Acting upon the strong surface indications as discovered by an old-time oil veteran, the Marrs Discovery well was brought in. This well gushed to a height of from 10 to 14 feet for a few days, then settled down to a flow of about 200 barrels per day. This started the activity. The atmosphere became surcharged with oil excitement. Oil men, lease men and "wildcatters" got busy. Oil companies (genuine and bogus) were organized over night, and there was a mad scramble to grab leases near to the discovery well. Drillers and oil rigs were hastened to the scene, operations begun and a little city of derricks went up almost in a night. The newspapers were flooded with oil advertisements and pictures of derricks.

Drilling continued day and night. Every week or two a new well was brought in, showing in some cases a small flow of oil, in others water, the result of drillers passing through the oil stratum unknowingly, the oil generally being a thick, low-gravity oil and slow in coming up. Gradually the excitement waned and the speculators left the field, leaving only a few determined drillers to carry on the work.

With the coming in of the Fuchs oil well the legitimate companies took heart and began drilling again, with the highly satisfactory results noted herein.

The opening of this new oil field, now sufficiently past the experimental stage to be called a real oil field, is of vast importance to the industrial interests of this section. It means cheap fuel, and cheap fuel is one of the things that helps to spell factories. San Antonio uses about 1,000,000 barrels of oil annually, and with

the development of this oil field and the increase in her industrial plants she will use even more.

Harbor Construction Machinery.

G. J. Tsatsos, 37 Rue D'Hermes, Athens, Greece:

"Committee entrusted with construction for building Piraeus harbor are about to order a scouring machine, and require same of a system that can be worked without any explosive. Lobnitz & Co., Renfrew, Scotland, constructors of dredging material, have, I believe, submitted offers for a machine of the kind required. I ask you to put me in touch with American firms you consider able to make offers for the rock-breaking machine required as above, asking them to forward me their catalogues. Please point out the great inconvenience of present delays in correspondence between the States and Greece and urge them to let me have complete illustrations of any machines they can offer, full descriptions of same in as much detail as possible, as well as price-lists, export terms and conditions of sale. They should state what works their machines have already been used for, the amount of fuel (coal or oil) consumed, the number of men required for the proper functioning, the amount of work each machine can perform daily. I especially wish to be clearly and exactly informed as regards the efficiency and strength of each machine, as the same dredging machine that will be used to clear up the surface of the submarine rocks before working the required scouring machine on same will, after the rocks have been broken up, be used to clear away the debris. You will understand by this that considerable efficiency in strength is required in the battering ram."

[Continued from Page 76.]

shown and Myers sprays described to show their claimed points of superiority.

Goodrich Products.

The March issue of the house paper of the B. F. Goodrich Company, Akron, O., mixes in pleasing style descriptive matter of the company's products, organization news and fun. The cover design is of interest—the figure of a man of action and ability carefully studying the needs of the world, minatured before him, and at his back the Goodrich factory producing every description of rubber article.

Standard Supplies.

Automatic dial, portable platform, dormant warehouse, wagon and truck scales are some of the types manufactured by the Standard Scale & Supply Co., 1631 Liberty Ave., Pittsburgh, Pa., and illustrated on a recently issued folder. Trucks and concrete mixers are other articles illustrated in the company's line, including engines, contractors' equipment, tiering equipment, coal and ice dealers' supplies.

Research on Steel Corrosion.

A pamphlet published by the American Sheet and Tin Plate Co., Frick Bldg., Pittsburgh, Pa., contains the report on a research on the corrosion resistance of copper steel, by D. M. Buck, Met. E. of the company, and J. O. Handy, Director of Laboratories of the Pittsburgh Testing Laboratory. The conclusion reached is that the best proportion for commercial purposes is .25 per cent. copper, which combination is said to have a higher corrosion resistance than pure iron with .06 per cent. copper.

Electrical Bulletins.

Bulletin No. 4380 of the General Electric Co., Schenectady, N. Y., illustrates and describes the company's incandescent headlights for all types of electric cars and explains the selection of the proper lamps. Bulletin No. 46023 from the same company briefly describes the arc circuit voltmeter, a special instrument for testing direct-current series circuits.

Saving on Steam Boiler Operation.

Believing that a saving of from 10 to 50 per cent. of the cost of power production can be made by the average isolated plant by the application of the proper methods and the use of the right equipment, the Coatesville Boiler Works, Coatesville, Pa., has addressed a complimentary book to the power-plant owner on "How You May Save Money in Operating Your Steam Boilers." The problems of physical losses, feed water, combustion, proper firing, steam, settings, devices for increasing power-plant economy, etc., are treated. The company has recently issued circulars on boiler and tank material carried in stock for rush orders.

Oxygen and Hydrogen Generators.

As a supplement to its earlier model of unit type generator the International Oxygen Co., 115 Broadway, New York, offers the new bipolar type described in a recent pamphlet, which is claimed to possess features of advantage over the former for certain conditions of operation. High efficiency of generation, purity of gases produced, simplicity and strength of design are claimed to be characteristics that recommend the machine to the user of gases in large quantities.

Kerosene Roller.

The Ohio two-cylinder 10-ton 30-horsepower kerosene roller and tractor is illustrated and described in a folder issued by the manufacturer, the Ohio Tractor Manufacturing Co., Marion, O. Simplicity of construction, ease of control, economy of operation and increased results are features that are attested by a prominent road builder to belong to the machine, as shown in a public letter giving his experience.

Blast Furnace Construction.

As the 29th supplement to its general book of views of blast furnaces built by it in the last decade and a half, the William B. Pollock Co., Youngstown, O., has issued a booklet containing views of the blast furnace of the Broken Hill Proprietary Co., Ltd., New Castle, New South Wales, Australia, said to be the first furnace in Australia. The company fabricated all the steel work, assembled, fitted up and shipped it crated, marked for erection.

Small Concrete Mixer.

A folder has been issued by the T. L. Smith Company, 1125 32d St., Milwaukee, Wis., illustrating all combinations of the Smith Mixerette, the smallest of the Smith line of mixers having a capacity of three cubic feet of mixed concrete per batch, or approximately five cubic yards per hour. It is equipped with either power charger, gated batch hopper or 16-inch low-charging platform, and includes a hoist mounted on truck between the engine and drum.

Orange Springs (Fla.) Territory.

Florida is spoken of as the farmer's, sportsman's and tourist's paradise in a booklet issued by the Florida Farms and Homes Co., Inc., Orange Springs, Fla., to set forth the company's holdings of 150,000 acres in the central of Florida, including town property, orange groves, unimproved land, etc., in a body 50 miles long and from 2 to 20 miles wide. The company is desirous of settling on its property people who will apply the industry in developing the land that would be expended elsewhere on a farm, with far greater reward, the owner asserts. Main stress is laid on agriculture in its various branches.

Rope Order Guide.

How to order Columbian rope and twine is told in a handbook recently issued by the Columbian Rope Co., Auburn, N. Y., arranged to make as easy as possible the preparation of orders and correct specification of needs by customers' salesmen, and to suggest to them new lines of purchases. An index of cordage items and buyers is included. The first and second editions of the book of which this is the third, in revised form, are said by the issuing manufacturer to have been very successful in promoting cordage sales.

Silent Power Transmission.

In a general bulletin of the Morse silent chain drive, manufactured by the Morse Chain Co., Ithaca, N. Y., the manufacturer points out this mode of transmission as a distinct advance, proved by successful applications and backed by a positive guarantee of results. Economical, efficient, compact silent drive is claimed to be attained to a degree peculiar to this type of transmission. Publications 12, 13, 14 are, respectively, a small pamphlet of short descriptions of installations showing their durability and efficiency for long periods, the Morse chain in textile mills, and on large power drives.



Winter Capital of America
NEW ORLEANS

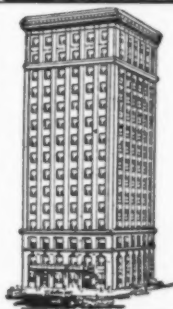
The Paris of the Western World

The St. Charles

"Finest All-Year Hotel in the South"

Management from Waldorf-Astoria.
Accommodates over 1000 guests.

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HOTEL WINECOFF

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Newest and Most Complete Hotel

Absolutely Fireproof EUROPEAN PLAN

200 ROOMS—Each with Individual Bath

RATES—\$1.50 and \$2.00 Per Day

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Ore Washing Machinery

WE BUILD EQUIPMENT FOR

Washing, Screening and Sizing Iron Ore, Barytes, Ochre, Zinc and other Ores

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Classified Opportunities

MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

HAVE YOU A VALUABLE PROPERTY FOR SALE? Farm, timber land, mineral property or any other? We can help you get in touch with possible purchasers by an advertisement in these columns. For rates see head of this department.

LAND GRANT.—86,349.9 acres in New Mexico. Soil is a silt deposit from two rivers, and is known to be the richest kind of land for farming and fruit raising. This grant is made of valley and low mesa land, with a little high tableland. Two rivers water the grant. 30,000 acres of valley land susceptible to irrigation and the highest state of cultivation. Every kind of a cereal, grapes, fruits, except tropical fruits, can be successfully raised. Sugar beets and bee culture are important industries. 4 crops of alfalfa each season and 8000 head of cattle can graze this range without interfering with other enterprises. Grant is in a solid block with timber for stock protection, fence posts and fuel. 14 miles main-line transcontinental railroad crosses the grant. Coal beds, building stone and quartz underlie this tract. Upon request will furnish reports of U. S. deputy surveyors. A fortune in this grant for someone. Absolutely the cheapest tract of land on the market today. Price \$2 per acre, all cash. Our information bureau is at your command. Panhandle Land Co., Canadian, Tex.

FOR SALE.—Valuable manganese property, consisting of 1400 acres of land and \$300,000 plant and equipment. The plant is now operated night and day. Big opportunity for person or persons with the necessary capital.

FOR SALE OR TRADE.—1000 acres of coal in Braxton county, West Virginia. Railroad runs through the property. Price \$30,000, or will trade for first-class Virginia farm.

FOR SALE OR TRADE.—Fine farm of 70 acres in Albemarle county, Virginia, near Charlottesville. Price \$6500. Will trade for good city property.

FOR SALE.—Fine farm in Northumberland county, Virginia, fronting on Chesapeake Bay; 170 acres; 150 in cultivation; 20 in woodland; good buildings. Price \$12,000. Reasonable terms.

P. A. Green & Company, Room 11, Real Estate Exchange, Richmond, Virginia.

WE OWN 8000 acres fine hardwood timber land, original growth. A large body of tale and immense beds of vari-colored marbles; also, 5000 H. P. water-power; all immediately on Southern Railway. We want additional capital to develop. Handsome dividends. North Carolina Tale and Mining Company, Hewitts, N. C.

FOR SALE.—2500 acres in the Arkansas zinc fields; rich in zinc and lead; whole tract covered with timber; will cut 4000 feet per acre, mostly over cup oak. Tremendous bargain at \$15 per acre. J. C. Harrison, Clarksville, Ark.

FORTY ACRES proven mineral land, two miles from Yellville, Marion county, Arkansas, greatest zinc field known. Sulphide and carbonate shown up. Plenty timber and water. Being worked under lease giving owners 10 per cent. royalty. Five thousand dollars for fee. Fredricks, Yellville, Ark.

TIMBER, MINERAL AND FARM LANDS IN FLORIDA is our business for over thirty years. We are up to date on Florida properties. Surveys and expert reports carefully and promptly made on all classes of properties. W. L. Van Duzer Co., Clermont, Fla.

FOR SALE OR LEASE.—A large tract of land containing feldspar (3 to 7 per cent. potash), also fuller's earth and kaolin. This land is close to S. A. L. R. R. Address Jas. A. & W. E. Hill, Abbeville, S. C.

FOR SALE.—Extensive and valuable brown iron, manganese and baryta deposits; developed and undeveloped. Box 908, Cartersville, Ga.

FOR SALE.—Iron, Coal and Timber Lands in Virginia, Tennessee and Kentucky. Address W. S. Palmer, Keokee, Va., or J. F. Munsey, Hagan, Va.

I HAVE 2000 acres of brown ore lands for sale in Franklin county, Ala. Call or write to C. E. Wilson, Sr., at Russellville, Ala., for price and terms.

PROMOTERS, TAKE NOTICE!—720 acres of mineral land in the new zinc fields of Arkansas for sale. Leslie Land Co., Leslie, Arkansas.

BORAX

BORAX IN CHILE, SOUTH AMERICA. Government engineers report 1,689,000 tons. Can show profits of \$45,000,000. Exceptional opportunity. Promoters and capitalists, write Box 152, Waxahatchie, Texas.

COPPER MINE

DEVELOP COPPER MINE; near big producer and on same vein; cheap and on easy terms. Address No. 1941, care Manufacturers Record, Balto., Md.

RATES AND CONDITIONS

Rate 20 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 18c. per line; 300 lines, 16c. per line; 500 lines or more, 15c. per line.

COAL AND ORE LANDS

BARGAINS—FOR SALE.
10,000 acres Coal Lands in Great Warrior Coal Basin, several miles frontage on Warrior River. These lands carry the celebrated Pratt Seam and other large seams of coal. I have for sale the largest deposit of Manganese Ore Lands in the whole country, estimated over 3,000,000 tons.
Large tracts of high-grade Coal Lands in Eastern and Western Kentucky.
3000 acres Red Ore Land and 1000 acres Self-Fluxing Ore Lands, well located in Birmingham District. T. S. Smith, 1015-16 First National Bank Bldg., Birmingham, Ala.

COAL LAND

COAL LAND FOR SALE.—For sale cheap, to close an estate, 24,000 acres good coal land with a mine ready to operate; power plant, mining machines, cars, etc.; 14 miles of standard and narrow gauge railroad, connecting with the Southern Ry. at Lim Rock, Ala.; 65 miles westerly from Chattanooga; 4 locomotives, cars; 80 dwellings and large commissary; much valuable hardwood timber with two good sawmills; most of the land on Cumberland plateau suitable for agriculture when cleared, and two improved farms. Coal known locally as Belmont Block, very hard, high in volatile matter, containing some cannel-coal (co-related to Bon Air seam of Tenn.), excellent for domestic use. Low freight rates and best of markets. For full particulars, price and terms address F. D. Pierce, Bridgeport, Ala.

COAL LAND FOR SALE.—Four thousand acres of coal land in McDowell county, West Virginia, on the Norfolk & Western Railway, carrying a six-foot vein of the celebrated Mohawk steaming coal, also a four-foot vein of good domestic coal.
Very desirable property with unusual railroad facilities. An opportunity for the establishing of three operations. Address Kenderline & Wygal, Radford, Virginia.

ILLINOIS COAL ACREAGE.—520 to 100,000 acres best Illinois Coal, 13,100 to 13,660 B. T. U. Bituminous. Becoming known that Southern Illinois has close second to Pittsburgh coal, 65% now owned by corporations. A wonderful safe, sane investment. 25% profits to those operating well equipped mines. I can prove all I claim. Will show you around if interested. My specialty, coal acreage and selling mines. S. J. Burkitt, Moweaqua, Ill.

WISE COUNTY, VA. COAL ACREAGE.—1000 acres for sale or lease, Stonegate coking vein, Roda gas vein. Drift openings. Price reasonable. Write owner for full information. Address Box 193, Lancaster, Pa.

COAL AND TIMBER LANDS

COAL AND TIMBER FOR SALE.
Valuable tract located in West Virginia, accessible to railroads and markets. Theodor G. Lurman & Co., Baltimore, Md.

10,000 ACRES in Bledsoe County, Tenn.; 35,000,000 feet of hardwood, also coal. 25,000 acres in Grundy County, Tenn.; railroad through the property. 100,000,000 feet, also coal, 15,000 acres, Scott and Morgan Counties, Tenn. 50,000,000 feet, also coal and oil, 30,000 acres, 186,000,000 feet. 75% pine timber, in Cumberland and Blaine Counties, N. C. By H. C. Hoggard & Co., Norfolk, Virginia.

THIS PROPERTY WARRANTS INVESTIGATION. Experienced man should make \$5000 or better in profits yearly. 376 acres coal land (oil rights sold); 2 seams 3-ft. coal; 500,000 ft. timber; 12 houses. On C. & O. Ry., Belva, W. Va. Price \$4500. Big opportunity; big bargain; perfect title. Owner, F. O. Havener, 19 Milk St., Boston, Mass.

FOR SALE.—9000 acres coal and virgin timber in Harlan county, Ky., on the L. & N. R. R.; 5 seams high-grade coal 4 ft. to 9 ft. thick. Title perfect. Come and see and be convinced. Smith Leford, Harlan, Ky., Box 116.

FOR SALE.—Coal and timber lands in Southeastern Kentucky, near railroads; any sized tracts; also mineral and timber tracts in East Tennessee. Spears Havelly, Hubbard Springs, Va.

TIMBER LAND

TIMBER LANDS FOR SALE.—23,440 acres in Florida, estimated to cut 70,500,000 feet long-leaf yellow pine, 840,000 feet of cypress. Also, 50,000,000 feet of pine, cypress, poplar, red and white oak, red and white gum, in South Carolina. This estimate was made by a man of 40 years' experience. Only 1133 acres is in fee; remainder 13 years to cut and remove. H. C. Hoggard & Co., Norfolk, Va.

TIMBER LAND

SIX MILLION FEET, half pine, half oak, 1800 acres fine land in fee, 7 miles to siding, over improved road. Price \$22,500, \$5500 cash, balance 1 and 2 years. E. M. McClure, Richmond, Va.

TIMBER

FOR SALE—BY OWNERS.—Several tracts hardwood timber, white oak and chestnut oak, in boundaries from 2,000,000 to 15,000,000 feet, located on Chesapeake & Ohio Railway in Allegheny county, Virginia; also on branch Norfolk & Western Railway in Craig county, Virginia, and Monroe county, West Virginia. Address "Timber," P. O. Box 865, Charleston, W. Va.

REAL TIMBER BARGAINS.—50,000,000 ft.; 70% N. C. pine, poplar and cypress, all original growth; on Southern R. R. in South Carolina. Liberal terms and low price. J. P. Mulherin (owner), Augusta, Ga.

LUMBER

FOR SALE.—Dressed or rough, 400,000 to 500,000 ft. second growth Middle Ga. pine lumber. Bank reference required and given. A. J. Orr, Washington, Ga., R. F. D. No. 2.

SAWMILL TIMBER, ETC.

SAWMILL AND TIMBER FOR SALE.—We have a band mill almost as good as new, installed and ready to operate, with 20,000,000 ft. hardwood timber. Will sell cheap. Terms easy. J. S. Cowart, Arlington, Ga.

TIMBER AND CUT-OVER LAND

30,000,000 FEET hardwood, 3 miles of railway. Price \$1.50 per M.; 10,000,000 feet virgin pine; \$3.25 per M. Cut-over lands in size from 100 acres to 80,000. I. D. Bardin, Columbia, S. C.

FARM AND TIMBER LANDS

4000 ACRES, half timber and half cut-over land, for sale, preferably as a whole or in tracts of not less than 1000 acres each; property adjoins the town of Surrency, Appling county, Ga., on Southern Railway main line; fine stand of both pine and cypress timber; ideal location for stock farm or combination mill and colony farming. Land in vicinity noted for its record production of staple crops. For sale by owner, attractive price and terms, especially if bought as a whole. Wm. Hurd Hillyer, Atlanta, Ga.

SEVEN MILLION FEET of good saw timber, mostly yellow pine; nice size; long and smooth; together with 1568 acres of good land in Amelia Co., Va. This property has never been on the market before. Price \$33,000. Green & Redd, 9th and Franklin Sts., Richmond, Va.

WE OWN LARGE TRACTS OF TIMBER LANDS, cut-over lands and colonizing lands. If interested, address H. H. Wefel, Jr., & Co., Mobile, Alabama.

TWO MILLION FEET of good saw timber (by estimate), together with 450-acre farm. All for \$7500. 5 miles from station. Green & Redd 9th and Franklin Sts., Richmond, Va.

SEND FOR Descriptive Bulletin No. 14 on Georgia farms, timber land, stock ranches and pecan groves. Brotherton & Callahan, East Point, Ga. (Near Atlanta).

CITY AND SUBURBAN PROPERTIES

THE CITY OF CHARLOTTE, N. C. in spite of wars and rumors of wars, is going steadily on with its building operations and growth.

Over 150,000 of new homes just being completed or in process of completion.
Over \$750,000 of business and public buildings in process. We offer several very attractive investment opportunities in central business locations. Also, several very well located suburban tracts which are capable of large profits within the next few years.

Thirty years' real estate experience in New England and in Charlotte at your service in dealing with F. C. Abbott & Company, 1002 Commercial Bank Bldg., Charlotte, N. C.

SUBDIVISION PROPERTY.—200 acres adjoining the city of Tampa in the restricted residential section lying between the two bays. A 100-foot boulevard is to be built through this property running from bay to bay. Will sell as a whole or in 40-acre tracts, or will sell an interest in the above tract and develop it. Thos. C. Hammond & Co., Giddens Bldg., Tampa, Fla.

STOCK RANCHES AND FARMS

60,000-ACRE improved ranch, stocked with Hereford cattle, near railroad; plenty of shallow water and good grass. Box 40, Marfa, Texas.

SOUTHERN HOME

CHARMING Winter or Summer Home located at Beaufort, S. C., on Beaufort River, 3 stories, 12 rooms, 2 baths; 300 feet of piazza; neat 2-room cottage; servants' quarters, garage, and stable for horse and cow. Includes 2 acres of land, lovely lawn and garden, the whole surrounded by a brick wall. The summer breezes are delightful, the exposed water pipes have never frozen all this winter. Partridges are plentiful and a number of deer have been killed nearby. Owner must sell. For further particulars address Rev. C. C. Brown, Beaufort, S. C.

FRUIT, FARM AND TRUCK LANDS

THESE COLUMNS ARE CLOSELY READ BY PEOPLE for information of all kinds about Southern properties of every description. If you have a property of any kind that you want to dispose of, try an advertisement in these columns. Others have to their advantage. For rates see head of department.

ALABAMA

COME TO ALABAMA.—1410 acres, located 6 miles from Eufaula, Ala., bordered by Chattahoochee River, free from overflow and as level as a floor; 910 acres in cultivation all in one body; deep black sandy loam with clay subsoil; produces 1½ bushels of cotton per acre; 50 to 80 bushels of corn per acre. This is one of the best-located and best managed tracts of land in Alabama. Improvements include 16 good tenant-houses, a nice, large, 2-story dwelling with large barns and outbuildings, large gin on place with latest improved machinery in operation. This is a beautiful country home and a bargain. Price \$30 per acre; ½ cash; balance, any reasonable terms at 6 per cent. interest. Bailey-Jones Real Estate & Insurance Company, 221 North Main Street, Birmingham, Alabama.

120 ACRES of level, good land on railroad, mile from station, 40 miles from Birmingham; small house, barn and 40 open. Offers for \$3000 on very easy terms. Also, 120 acres with 75 open cultivation; all level and fertile; \$2000 dwelling, etc.; all stock, implements and feed and for possession at once for \$4400, with \$2000 cash down. I have some fine bargains to offer. Address Sid L. Benson, Whitney, Ala.

FLORIDA

FREE, "THE WINTER GARDEN OF AMERICA," to Fruit Growers, Truckers, General Farmers, Cattle, Hog and Poultry Raisers. Folks interested in the great Indian River Section of Florida write Indian River Farms Company, 15 Seminole Ave., Vero, Florida.

FLORIDA.—Do you intend visiting the land of health and sunshine this winter? If so, March is Florida's finest month. Write M. J. Hoening, Prop. Hotel Palma, West Palm Beach, Fla., for instructive booklet.

LAND.—For Sale—10,000 to 70,000 acres Florida land; excellent quality; good buildings; splendid advantages for general farming and stock raising; also have truck and citrus fruit land in State. E. A. Howard, 320 N. 12th St., St. Louis, Mo.

PECAN GROVE.—Best budded varieties. This grove is scientifically planted in soil that has proven. No experiment. Will sell 5 acres up to 40 acres at less than one-half the usual price, allowing very easy payments. Grove is in Alachua County, Florida. Write for particulars. T. B. Hamby, 110 Heard Bldg., Jacksonville, Fla.

9000 ACRES LAND ready for colonizing in Escambia county, Fla.; located on the L. & N. Ry., from ¼ to 3 miles from the station of McDavid and 30 miles north of Pensacola; contains large millpond and six good houses; excellent fishing and hunting; good soil. Price very low and terms reasonable. Special terms to a colonization company. Write M. C. Boley, owner, R. F. D. 2, Pensacola, Fla.

12,000 ACRES of Florida pine land for sale or trade for unincumbered property. The land is well suited for immediate colonization, is high dry and excellent land for trucking or fruit growing. Must be sold within three months. The price is right, also the terms. Address Mrs. A. T. Barkins, Box 1442, Pensacola, Fla.

FLORIDA.—8000 acres cut-over land lying between Lake Crescent, Lake Louisa and Lake George in Putnam and Volusia counties, traversed by main line of A. C. L. Railway; large portion especially adapted to orange and grapefruit culture; balance sweet potato and general farming land; lands all around selling \$20 to \$100 per acre. Price, \$10 per acre in a body; terms. Correspondence solicited. Chas. A. Brown, 30-31 Buckman Building, Jacksonville, Fla.

FLORIDA LAND FOR SALE.—30,000 acres of land for sale in Madison County, Florida, for \$5 an acre. This is certainly a bargain for the owner was offered \$3 per acre for same two years ago. 96% of this land is in orange and dry; title clear; warranty deed and abstract. This land only being on the market for a short time, will accept one-third cash, balance 1, 2 and 3 years at 7 per cent. For particulars see or write JOE HUNTER, WEST 308 and 210 West Building, Jacksonville, Florida.

FOR SALE.—40,000 acres wholesale; Southern Lee county; in line for immediate development; some pine and cypress. For particulars write A. G. Bauder, Cedar Rapids, Iowa.

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